

County Council of Shropshire.

REPORT

BY THE

COUNTY MEDICAL OFFICER OF HEALTH

ON THE

VITAL STATISTICS AND SANITARY CONDITION

OF SHROPSHIRE

DURING THE YEAR 1908.

INCLUDING A

SUMMARY OF THE ANNUAL REPORTS OF THE DISTRICT MEDICAL
OFFICERS OF HEALTH, AND A REPORT ON THE ADMINISTRATION
OF THE MIDWIVES ACT.

JAMES WHEATLEY, M.D., D.P.H.

SHREWSBURY,

July, 1909.

TO THE CHAIRMAN AND MEMBERS OF THE SANITARY
COMMITTEE OF THE SHROPSHIRE COUNTY
COUNCIL.

GENTLEMEN,

I have the honour to present my Annual Report for 1908.

The general arrangement of previous reports has been continued in the present one. The second part of the report is a condensed summary of the reports for the various districts. In the first part each subject is dealt with as affecting the whole County.

A report is given on the administration of the Midwives Act.

I am, Gentlemen,

Your obedient Servant,

JAMES WHEATLEY.

COUNTY HEALTH DEPARTMENT,

COUNTY BUILDINGS,

July, 1909

I N D E X.

To PART I.

PAGE	PAGE	PAGE
Administrative County .. 4	Housing Conditions .. 37, 38, 39	Pollution of Rivers .. 43, 44
Age Periods 6	House to House Inspection 38, 49, 50	Population 4, 5
Antitoxin 20, 21	Illegitimate Births 7	Premature Births 14
Association for the Prevention of Consumption .. 25, 28	Improper Clothing of Infants, etc. (deaths from) .. 14	Preservatives in Food .. 50
Bacteriological Examinations 32, 33	Improvement of Wells .. 41	Public Health (Tuberculosis) Regulations, 1908 .. 28
Births, Birth-rate 7, 8, 9	Increase of Population .. 5	Puerperal Fever 23, 53
Cancer 30, 31, 32	Infant Feeding (teaching of) .. 15	Rainfall 63
Causes of Death 16	Infantile Mortality 12	Registration County .. 4
Cerebro-spinal Meningitis .. 23	Inhabited houses 5	Registration of Cowkeepers and Milksellers 46
Coal Mining (effect on birth-rates) 7	Infectious Diseases 17—23	Registration Districts .. 4
Confinements attended by Midwives 57	Inspection 49	Royal Commission on the Relations of Human and Animal Tuberculosis .. 49
Corrected Death-rates .. 11	Inspection of Midwives 51	Sanatorium for Consumptives 28, 29
Corrections for age and sex .. 6	Isolation Hospitals 36, 37	Scarlet Fever 17
Corrections for Institutions .. 9	Marriages 7	Scavenging 44, 45
Cowsheds and Dairies .. 46—49	Measles 18	School Children (Inspection of) 33
Dairy Cattle (Inspection of) .. 46—49	Meat Inspection 49	School Closure 20, 33
Dairy Cattle (Harper Adams College experiments on) .. 47	Medical Assistance for Midwives 54, 55	Sewage Disposal 43, 44
Deaths, Death-rates .. 9—32	Medical Help (Notification of) .. 52	Sewerage 42
Death-rates in age periods .. 10	Medical Inspection of School Children 33	Shropshire Nursing Federation 18, 19
Definition of Puerperal Fever 23	Midwives Act 51	Small-pox 17
Diarrhoea 22, 23	Midwives (Lectures to) 63	Spread of Disease in Schools .. 20, 21
Diphtheria 20, 21, 22	Midwives censured 55, 56	Standard of Purity for Milk .. 47
Disinfection 35	Midwives reported to Local Supervising Authority .. 55, 56	Steam Disinfectors .. 35
Drainage 42	Midwives (Supply of) 56—63	Still-births 52, 53
Early Diagnosis of Consumption 29	Midwives suspended 55	Suspension of Midwives .. 55
Enteric Fever 22	Milk and Dairies Bill 46, 48	Teaching of Infant Feeding .. 15
Enteritis 22, 23	Milk Supply 46—49	Town life (Effect on Birth-rate) .. 9
Errors of Feeding of Infants (deaths from) 14	Notification of Births Act 13, 15	Training of Midwives .. 63
Excrement Disposal .. 42	Notification from Schools 21	Tuberculosis 24—29
Factories and Workshops .. 50	Notification of Phthisis .. 25, 26, 27	Tuberculosis Order 1909 .. 47, 48
Factors for Correction .. 6	Nurses to visit Infectious Cases 18, 19, 20	Typhoid Fever 22
Feeding and Care of Infants .. 15	Parturition (Accidents and Diseases of) 32	Vaccination 34
Food and Drugs 50	Parish Councils 41	Water Supplies 39—42
Health Visitors 15	Persons per House 5	Whooping Cough 20
Hospital Accommodation .. 36, 37	Phthisis 24—29	Women for Sampling Food .. 50

To PART II. (DISTRICT REPORTS).

Atcham 65, 66, 67	Drayton 84, 85	Shifnal 8, 99
Bishop's Castle 68, 69	Ellesmere, U. 86	Shrewsbury 100, 101, 102
Bridgnorth, U. 69, 70	Ellesmere, R. 87, 88	Teme 103, 104
Bridgnorth, R. 71	Ludlow, U. 88, 89	Wellington, U. 104, 105
Burford 72	Ludlow, R. 89, 90	Wellington, R. 106
Chirbury 73	Newport, U. 90, 91, 92	Wem, U. 107
Church Stretton, U. 74, 75, 76	Newport, R. 92, 93, 94	Wem, R. 108
Church Stretton, R. 76, 77, 78	Oakengates 95, 96	Wenlock 109, 110, 111
Cleobury Mortimer 78, 79	Oswestry, U. 96, 97	Whitchurch, U. 112, 113, 114
Clun 80, 81	Oswestry, R. 97, 98	Whitchurch, R. 114, 115
Dawley 82, 83, 84		

PART I.

THE ADMINISTRATIVE COUNTY.

POPULATION.

The population for the whole Administrative County was in 1891, 236,827, and in 1901, 239,783. In 1901 the total population of the urban and rural districts, containing a small part of Staffordshire, was 240,606, and it is estimated to be 242,864 in the middle of 1908. This is the population on which the county rates are calculated.

The populations on which the district rates are calculated are those estimated from local knowledge by the Medical Officers of Health. In some of the districts corrections of the population have been made on account of the public institutions.

The population of the Registration County is estimated at the middle of 1908 to be 263,270. It includes certain small portions of the Administrative Counties of Chester, Flint, Denbigh, Montgomery, Hereford, Worcester, and Stafford. It does not, however, include certain portions of the Administrative County of Salop, which are situated in the Registration Counties of Montgomery, Radnor, Worcester, and Stafford.

The registration county is the area used by the Registrar-General for his mortality statistics relating to this county. It is also the area used by the Local Government Board for vaccination statistics.

The inconvenience caused by the lack of correspondence between registration and administrative districts has been referred to in previous reports. It is principally on account of the fact that registration counties do not correspond with administrative counties, nor registration districts or sub-districts with sanitary districts, that the very valuable information contained in the Registrar-General's Reports is of comparatively little use to those engaged in sanitary administration. *It is extremely desirable that registration districts and sub-districts should be co-terminous with administrative districts.*

In this report the statistics refer to the Administrative County unless stated otherwise.

5
Table 1.
POPULATION, &c., IN URBAN AND RURAL DISTRICTS.

URBAN DISTRICTS.	Inhabited houses.			Population.				Percentage, Increase or Decrease between 1891 & 1901.
	1891	1901	Average No. of persons to each house.	1891	1901			
					Males.	Females	Total.	
Bishop's Castle ..	361	354	3.9	1586	666	712	1378	— 13.1
Bridgnorth ..	1215	1300	4.6	5865	2791	3261	6052	+ 3.2
Church Stretton ..	131	147	5.5	770	399	417	816	+ 5.9
Dawley ..	1523	1633	4.6	6996	3940	3582	7522	+ 7.5
Ellesmere ..	392	425	4.5	1830	868	1077	1945	+ 6.2
*Ludlow ..	959	1372	4.6	4460	3065	3308	6373	+ 2.0
Newport ..	714	720	4.5	3403	1518	1723	3241	— 4.7
Oakengates ..	2117	2187	4.9	10680	5739	5167	10906	+ 2.0
Oswestry ..	1778	2083	4.6	8496	4507	5072	9579	+ 12.7
Shrewsbury ..	5600	6065	4.6	26967	13423	14972	28395	+ 5.3
† Wellington ..	1284	1327	4.7	5909	3049	3234	6283	+ 6.3
Wem ..	406	453	4.7	1878	987	1162	2149	+ 14.4
Wenlock ..	3447	3568	4.4	15703	7998	7868	15866	+ 1.0
Whitchurch ..	1006	1129	4.6	4930	2476	2745	5221	+ 5.9
All Urban Districts	20933	22763	4.5	99473	51426	54300	105726	+ 4.4
RURAL DISTRICTS.								
Atcham ..	4264	4329	4.8	21144	10314	10581	20895	— 1.1
Bridgnorth ..	1934	1886	4.5	9185	4200	4373	8573	— 6.6
Burford ..	277	263	4.6	1361	600	633	1233	— 9.4
Chirbury ..	899	812	4.3	4084	1796	1743	3539	— 13.3
Church Stretton ..	1019	1005	4.4	4631	2242	2237	4479	— 3.3
Cleobury Mortimer	1251	1292	5.2	5911	3717	3003	6720	+ 13.6
Clun ..	1585	1487	4.5	7459	3429	3395	6824	— 8.5
Drayton ..	2613	2655	4.4	11969	5703	6005	11708	— 2.1
Ellesmere ..	1649	1658	4.7	8119	3963	3948	7911	— 2.5
*Ludlow ..	2242	2003	4.7	10863	4904	4681	9585	+ 5.0
Newport ..	1302	1284	4.7	6327	3071	2962	6033	— 4.6
Oswestry ..	3213	3220	4.5	15107	7357	7370	14727	— 2.5
† Shifnal ..	1923	1918	4.6	9120	4335	4509	8844	— 3.0
Teme ..	388	388	4.7	1870	970	876	1846	— 1.3
† Wellington ..	2271	2499	4.7	10780	6000	5773	11773	+ 9.2
Wem ..	1801	1840	4.4	8241	4119	4147	8266	+ 0.3
Whitchurch ..	423	424	4.5	2031	956	968	1924	— 5.2
All Rural Districts	29054	28963	4.6	138202	67676	67204	134880	— 1.08

*The 1901 figures for Ludlow Borough include the additions made in November, 1901, and the same numbers have been deducted from the Ludlow Rural District, viz., 385 inhabited houses, 894 males and 927 females. The percentage increase or decrease has been calculated without these additions and deductions.

†This District (Shifnal) includes 184 inhabited houses, 427 males and 396 females in the Administrative County of Stafford.

‡The population of the added part of Wellington, about 827, has not been transferred in this table from the Rural to the Urban District.

Table 2.
POPULATION IN AGE PERIODS AT 1901 CENSUS.

URBAN DISTRICTS.		Percentage at each age period.	RURAL DISTRICTS.		Percentage at each age period.
Age Period.	Total.				
Under 1	2462	2.4	2965		2.2
1—5	9255	8.9	12171		8.9
5—10	11094	10.7	15176		11.2
10—15	10818	10.4	14275		10.5
15—25	19671	18.9	22940		16.9
25—35	15508	14.9	18610		13.7
35—45	12132	11.7	16007		11.8
45—55	9337	9.0	12743		9.4
55—65	7234	7.0	10719		7.9
65—75	4522		7033		
75—85	1680	6.1	2859		7.6
85—95	189		373		
95 and upwards	3		7		
	103905		135878		

These figures are no doubt getting less accurate as the census year becomes more remote, and as all our statistics are based upon the census populations, modified on the assumption that the increase in the last intercensal period has continued unaltered since the last census, in many cases a quite unjustifiable assumption, it is evident that a census at shorter intervals is in many ways desirable.

There is no doubt that the age distribution of the population has become much modified by the decreasing birth-rate of the last 30 years, and that this change in age distribution reacts both on birth-rates and death-rates. In comparing the rates of one decade with another these disturbing factors should be eliminated.

It is of great importance to be able accurately to compare the effect upon health of the conditions of town and country life, in order that we, as a nation, may be able to determine what sacrifices are desirable to maintain a numerous country population.

A comparison of the distribution of the population in urban and rural districts is very instructive. The larger percentage under one year in the urban districts indicates a higher birth-rate. In the period 1—5 years, this is equalised by the lower death-rate of the rural districts, and in the periods 5—10 and 10—15 the percentage is slightly higher in the rural than in the urban districts. At 15 the migration from the country to the towns begins, and from that age until 45, the percentage is considerably higher in the urban districts, but above 45 years, *i.e.*, at the periods of high mortality rates, the percentage is distinctly higher in the rural districts.

This difference in the distribution of the population necessarily influences the death-rates apart from any consideration of health conditions. In order to compare one district with another or one district with the whole country, it is necessary to prepare factors of correction which remove the disturbing influence due to unequal distribution of age and sex. The factor for correcting the rates of the Registration County of Salop is .8654, that for the Administrative County is .8918, that for the combined Urban Districts is .9353, and that for the combined Rural Districts is .8622.

I. (URBAN). STATISTICS FOR 1908.

URBAN DISTRICTS.	Estimated Population 1908	Number of Births.	Birth-rate.	DEATHS UNDER 1 YEAR OF AGE.		DEATHS AT ALL AGES.		Death-rates after correction for deaths of non-residents dying in the district, and of residents dying outside.	DEATH-RATES FROM VARIOUS CAUSES.							
				Number	Rate per 1000 Births.	Number	Death-rate.		Seven Chief Zymotic Diseases.	Epidemic Influenza	Phthisis.	Other Tubercular Diseases	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.
Bishop's Castle ..	1310	30	23.2	3	100	33	25.2	20.1	.00	.77	2.32	.77	1.55	.00	1.55	1.55
Bridgnorth ..	6060	117	19.2	18	154	105	17.1	15.6	.33	.00	.99	.33	1.32	1.15	.99	.99
Church Stretton ..	1400	19	14.0	2	105	12	8.6	5.1	.00	.00	.00	.00	1.46	.73	1.46	..
Dawley ..	7670	231	30.0	34	147	117	15.2	16.0	1.56	.26	.65	.39	2.78	1.17	1.95	.91
Ellesmere ..	2010	43	21.3	6	139	55	27.3	20.8	.00	.00	1.49	.00	.50	.99	1.99	1.99
Ludlow ..	6570	143	21.7	17	119	118	17.9	17.6	1.07	.15	2.13	.76	1.07	.15	3.19	.91
Newport ..	3169	72	23.2	5	69	50	15.8	15.5	1.29	.32	1.61	.32	2.58	.97	.32	.32
Oakengates ..	11073	375	33.8	48	128	184	16.6	18.0	1.72	.81	.81	.63	.72	1.72	1.35	1.08
Oswestry ..	9950	247	24.8	22	89	121	12.1	13.8	.20	.30	.60	.90	1.00	.60	1.91	1.31
Shrewsbury ..	29653	688	23.2	85	123	477	16.0	15.9	1.20	.60	1.23	.26	1.33	.73	2.00	.97
Wellington ..	7573	170	22.4	16	94	123	16.2	14.9	1.06	.26	1.32	.66	.53	1.45	1.72	1.19
Wem ..	2274	53	23.3	5	96	39	17.1	15.3	.00	.44	.44	.00	2.20	.00	.44	1.32
Wenlock ..	15894	381	24.0	39	102	233	14.6	14.8	.50	.63	1.00	.44	1.32	.82	2.07	1.26
Whitchurch ..	5424	136	25.3	9	66	86	15.8	14.7	.93	.56	.93	.37	.93	.74	3.54	1.49
Whole of Urban Districts ..	109889	2705	24.6	309	114	1753	16.0	.94	.46	1.09	.45	1.25	.89	1.92	1.09	
Whole of Urban and Rural Districts ..	242864	5884	24.2	591	100	3654	15.0	.68	.39	.95	.43	1.07	.90	1.94	1.08	

apart from any consideration of health conditions. In order to compare one district with another or one district with the whole country, it is necessary to prepare factors of correction which remove the disturbing influence due to unequal distribution of age and sex. The factor for correcting the rates of the Registration County of Salop is .8654, that for the Administrative County is .8918, that for the combined Urban Districts is .9353, and that for the combined Rural Districts is .8622.

These figures have been applied to Table 6 in order to correct the crude death-rates. It will be seen by reference to this table that the corrected rates are very considerably lower, especially in the rural districts, than the crude rates.

In order to have quite comparable figures, factors of correction should be worked out for each disease. Disease rates in this County thus corrected would, as a rule, be lower than the crude rates, especially in the rural districts, and this would be very markedly so, in the case of cancer. On the contrary the phthisis rate in the rural districts would be slightly increased by the correction.

MARRIAGES.

The number of marriages in the Registration County for 1908 was 1695, compared with 1704 in 1907. The marriage-rate was 12.9 compared with 13.5 in 1907, 12.7 in 1906, 13.9 in 1905, 13.2 in 1904, 13.4 in 1903, and 14.2 in 1902.

BIRTHS.

The total number of births in the County was 5884, giving a birth-rate of 24.2 compared with 24.1 in 1907, 24.7 in 1906, and 25.8 in 1905. The Urban rate was 24.6 and the Rural rate was 23.9.

Table 3.

BIRTH-RATES, ETC., FOR THE REGISTRATION COUNTY, AND ENGLAND AND WALES FOR THE YEARS 1890—1908.

	Births to 1000 Living.										Illegitimate Births to 1000 Births.									
	Ten years. 1890—1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	Ten years. 1890—1899	1900	1901	1902	1903	1904	1905	1906	1907	
Shropshire (Registration County)	26.8	25.7	26.2	26.5	26.4	26.2	25.6	24.7	23.8	24.2	72	62	59	60	64	67	59	65	61	
England and Wales	30.0	28.7	28.5	28.6	28.4	27.9	27.2	27.1	26.3	26.5	42	40	40	39	39	40	40	40	39	
Males Born to 1000 Females Born.																				
	Ten years. 1890—1899	1900	1901	1902	1903	1904	1905	1906	1907											
Shropshire (Registration County)	1034	1032	1004	1021	1029	1033	1045	1053	1023											
England and Wales	1036	1033	1039	1039	1035	1037	1036	1041	1039											

The decline of the birth-rate of the County which has been progressive for many years has received a slight check. The birth-rates of the various sanitary districts are given on table 1 Urban and Rural. The birth-rates in the districts of Oakengates, Cleobury Mortimer and Dawley, are again greatly in excess of those of the other districts, and this agrees with the statement in the Registrar-General's Report for 1907, that "broadly speaking the fertility rates are high in nearly all the mining counties and low in the agricultural counties."

As explained in previous reports these crude rates are very misleading when used for comparing one district with another, on account of the difference in the age distribution of the population. This is most marked when a typically urban district is compared with a typically rural one, or the combined urban districts with the combined rural districts. The following table giving the birth-rates for (1) England and Wales, (2) the Administrative County of Shropshire, and (3) the Urban, and (4) the Rural Districts of Shropshire, calculated on the whole population of the district and also calculated on the number of females between 15 and 45, the active child-bearing period, shows this very clearly.

Birth-rates for 1908 calculated (1) on whole population, (2) on Females between 15 and 45.

	Birth-rates calculated on the whole population.	Birth-rates calculated on the number of females between 15 and 45 years of age.
England & Wales	26.5	106
Shropshire (Administrative County)	24.2	110
Shropshire—Urban Districts	24.6	105
Shropshire—Rural Districts	23.9	114

The result of this method of calculation, which is undoubtedly the correct one, is that the Rural Districts of Shropshire have a higher birth-rate than the Urban Districts, and also a rate higher than that of England & Wales.

For the following table the same method of calculation has been applied to the sanitary districts of the County:—

Table 4.

BIRTH-RATES FOR 1908 PER 1,000 FEMALES LIVING BETWEEN THE AGES 15 AND 45.

URBAN DISTRICTS.	RURAL DISTRICTS.
Bishop's Castle 106	Atcham 109
Bridgnorth 75	Bridgnorth 108
*Church Stretton 53	Burford 95
Dawley 164	Clirbury 109
Ellesmere 82	Church Stretton 105
Ludlow 89	Cleobury Mortimer 177
Newport 94	Clun 108
Oakengates 181	Drayton 110
Oswestry 100	Ellesmere 102
Shrewsbury 91	Ludlow 113
Wellington 92	Newport 114
Wem 99	Oswestry 122
Wenlock 114	Shifnal 114
Whitchurch 100	Teme 98
Combined Urban Districts 105	Wellington 124
	Wem 118
	Whitchurch 79
	Combined Rural Districts 114

*Figures not very reliable owing to expansion of District since 1901 Census.

It is clear that the real birth-rates are considerably higher in the rural than in the urban districts, and if the semi-rural districts of Dawley and Oakengates were transferred to the rural districts the difference would be much more marked.

The census returns also show that amongst the married women between 15 and 45 years of age there is a larger proportion at the low age periods in the urban districts ; a factor which should tend to cause a higher birth-rate in the urban districts.

The following quotation from the Report of the Registrar-General for 1907 puts this matter very clearly as it affects the whole country :—

“ There are sufficient grounds for stating that the fertility of wives in districts that are wholly rural is about 7 per cent. greater than that of wives in towns. It should be observed, however, that the continuous migration of young persons from the country has considerably reduced the normal proportion of younger married women in the rural districts; if in the town and country districts the proportions of married women at the several ages were equal, the additional fertility of the latter would be still more marked.”

Country districts have therefore not only lower death-rates but also higher fertility rates. These facts are of the utmost importance in considering the probable effect of the continued increase of towns at the expense of the country population. There can be no doubt that even at a great sacrifice it is desirable that a vigorous and numerous country population should be maintained. These considerations should have great weight in dealing with housing and other problems affecting country districts.

DEATHS.

The number of deaths in the county was 3,654, compared with 3,567 in 1907 and 3,629 in 1906, and the death-rate was 15.0 compared with a rate of 14.7 in the previous year. Details with regard to the deaths and death-rates in the various districts are given in Table I. and II. (urban and rural).

The deaths in the public institutions have been distributed, so far as possible, amongst the districts to which they belong, with the result that fairly correct death-rates have been obtained. The total number of deaths deducted from the various districts was 268, and the number added was 239, the final result being a reduction of the total deaths by 29, of which the deaths of out-county patients in the County Asylum account for a considerable proportion. The weak point in this correction is that we do not hear of all the deaths of Shropshire residents occurring in public institutions outside the county. Although these omissions will not be sufficient to appreciably affect the general death-rate they may be sufficient to appreciably affect the death-rate of a disease like cancer, which is treated to such a considerable extent in the hospitals of the large towns.

The highest death-rates amongst the urban districts were Ellesmere 20.8, Bishop's Castle 20.1, Oakengates 18.0, and Ludlow 17.6 ; amongst the rural districts Newport 16.9, Teme 16.7, and Cleobury Mortimer 16.1.

The death-rates for single years of small districts like Bishop's Castle, Ellesmere Urban and Teme have little or no significance.

Table 5.

DEATH-RATES IN THE URBAN AND RURAL DISTRICTS AT VARIOUS AGE PERIODS.

Age Periods.	Urban Districts.	Rural Districts.
Under 1 year	125.1	97.5
1-5 years	12.9	9.6
5-15 "	2.7	2.1
15-25 "	3.0	3.2
25-65 "	11.4	9.1
65 and upwards]	92.4	83.1

At all age periods, with one exception, the urban rates exceeded the rural rates, but the excess was most marked amongst children under the age of five.

In the following table a comparison is made of the rates both crude, and corrected for sex and age, of Shropshire urban and rural districts with England and Wales urban and rural counties.

The crude rate for Shropshire slightly exceeded the rate for England and Wales, although the corrected rate for the county was considerably below that for the whole country.

TABLE V. (URBAN).

INFANTILE MORTALITY DURING THE YEAR 1908.

DEATHS FROM STATED CAUSES IN WEEKS AND MONTHS UNDER ONE YEAR OF AGE.

CAUSE OF DEATH.	WEEKS.				Total under 1 month.	MONTHS.												Total under 1 year.	
	Under 1	1-2	2-3	3-4		1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12			
Small-pox		
Chicken-pox		
Measles	1	..	1	1	1	2	6		
Scarlet Fever	2	..	..	..	..	2		
Diphtheria		
Whooping Cough	2	3	2	1	2	1	1	1	2	1	..	16		
Diarrhoea, all forms	1	2	4	2	..	1	..	..	1	..	..	11		
Enteritis	1	1	1	3	..	3	1	..	4	..	..	1	1	13	
Gastritis, Gastro-intestinal Catarrh	2	1	..	2	..	..	1	..	..	..	..	..	6	
Premature Birth	28	5	5	1	39	3	2	..	..	..	1	..	..	..	..	45	
Congenital Defects	10	1	2	..	13	..	..	1	..	..	..	..	..	..	..	14	
Injury at Birth	2	1	..	..	3	1	..	..	..	..	..	..	..	..	..	4	
Want of Breast Milk	2	1	..	..	..	..	..	..	..	..	..	3	
Atrophy	10	2	2	4	18	11	6	4	4	..	2	2	1	..	..	48	
Tuberculous Meningitis	1	1	..	..	..	2	
Tuberculous Peritonitis	1	..	..	..	..	1	..	..	2	
Other Tuberculous Diseases	1	..	..	..	..	1	2	
Erysipelas	1	..	..	..	..	1	
Syphilis	1	..	1	..	..	1	..	..	..	..	3	
Rickets	
Meningitis (not Tuberculous)	1	..	..	1	..	..	..	..	1	..	..	1	..	1	..	4	
Convulsions	8	1	1	2	12	3	4	..	1	3	1	1	1	..	1	27	
Bronchitis	1	1	1	1	4	8	2	1	2	3	4	4	5	2	1	40	
Laryngitis	1	..	..	1	..	..	..	..	..	..	2	
Pneumonia	2	1	..	3	6	2	6	3	2	4	3	4	3	1	41	
Suffocation	1	..	2	..	3	1	..	..	..	..	..	..	..	..	..	4	
Other Causes	3	1	..	..	4	1	..	2	1	1	..	1	1	..	..	12	
TOTALS	63	16	15	9	103	42	27	22	17	17	18	16	16	10	9	10	308

One death in Shrewsbury—age not known.

as

ad a

e c

TABLE V. (RURAL).
INFANTILE MORTALITY DURING THE YEAR 1908.

DEATHS FROM STATED CAUSES IN WEEKS AND MONTHS UNDER ONE YEAR OF AGE.

CAUSE OF DEATH.	WEEKS.					Total under 1 month	MONTHS.												Total under 1 year.
	Under 1	1-2	2-3	3-4	1-2		2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12			
Small-pox	
Chicken-pox	
Measles	2	1	1	...	4	...	
Scarlet Fever	
Diphtheria	
Whooping Cough	2	1	3	...	1	...	...	1	...	2	...	10	
Diarrhoea, all forms	1	4	...	...	...	...	...	...	...	...	...	5	
Enteritis	2	...	1	3	1	4	...	2	...	2	2	2	...	1	18	
Gastritis, Gastro-intestinal Catarrh	1	...	...	...	...	...	...	...	...	...	1	
Premature Birth	53	5	5	1	64	2	...	...	...	...	...	...	...	...	...	...	66	
Congenital Defects	12	1	1	...	14	1	...	...	...	2	...	...	...	...	...	1	18	
Injury at Birth	5	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	5	
Want of Breast Milk	
Atrophy	8	2	2	8	20	6	5	5	3	1	1	1	1	...	...	1	44	
Tuberculous Meningitis	1	...	2	...	...	1	...	...	...	...	...	4	
Tuberculous Peritonitis	1	...	...	...	...	...	...	...	...	...	...	1	
Other Tuberculous Diseases	1	...	1	1	1	1	1	...	1	...	6	
Erysipelas	1	...	...	...	...	...	...	...	1	
Syphilis	1	...	...	...	...	...	...	...	...	...	1	
Rickets	1	...	...	...	...	...	...	...	...	1	
Meningitis (not Tuberculous)	1	1	1	...	...	...	...	...	...	2	
Convulsions	12	2	...	2	16	1	3	1	1	4	1	...	...	2	3	...	32	
Bronchitis	1	1	1	1	4	3	3	2	2	3	1	2	...	...	2	3	25	
Laryngitis	1	...	1	...	2	...	...	...	...	...	...	1	...	...	...	...	3	
Pneumonia	1	1	1	3	...	2	4	3	2	2	4	2	...	24	
Suffocation	1	...	1	...	...	...	...	...	...	...	...	2	
Other Causes	1	...	...	1	2	1	1	2	...	...	1	...	2	...	...	...	9	
TOTALS	93	13	10	15	131	21	23	23	12	17	10	9	9	10	11	6	282	

Table 6.

CRUDE AND CORRECTED DEATH-RATES.

URBAN AND RURAL DISTRICTS OF SHROPSHIRE AND ENGLAND AND WALES.

Period.	Shropshire.		England and Wales.	Urban Districts of Shropshire.		Urban Counties of England and Wales.	Rural Districts of Shropshire.		Rural Counties of England and Wales.
	Crude Rates.	† Corrected Rates.		Crude Rates.	† Corrected Rates.		† Corrected Rates.	Crude Rates.	† Corrected Rates.
1908	15.0	13.4	14.7	16.0	14.9	*	14.3	12.3	*
1907	14.7	13.1	15.0	15.2	14.2	16.4	14.3	12.3	12.8
1906	14.9	13.3	15.4	15.8	14.8	16.8	14.3	12.3	12.9
1905	14.9	13.3	15.2	15.4	14.4	16.5	14.5	12.5	13.2
1904	15.7	14.0	16.2	16.6	15.5	17.9	15.1	13.0	13.5
1903	14.8	13.2	15.4	15.8	14.7	16.9	14.3	12.3	12.8
1902	15.1	13.4	16.3	16.7	15.6	17.8	13.9	11.9	13.7
1901	15.5	13.8	16.9	16.2	15.1	17.7	15.0	12.9	15.3
1900	16.4	14.6	18.2	17.7	16.5	18.9	15.5	13.3	16.6

* These figures are not yet available.

† These are the rates of mortality that would result if the age and sex constitution of the population of the districts were identical with those of the population of England and Wales at the Census, 1901.

INFANTILE MORTALITY.

The infantile mortality for 1908 was 100, compared with 91 in 1907, 97 in 1906, 93 in 1905, and 115 in 1904.

The rate for England and Wales was 121, and excluding 218 towns, 110.

In Table I. Urban and Rural are given the infant rates for each sanitary district, and in Table V. a detailed analysis is given with regard to causation of death and age at death.

The rate for the combined urban districts was 114, and that of the rural districts 89, or about 22 per cent. lower.

The high infantile rates amongst the urban districts were Dawley 147, Ellesmere 139, Oakengates 128, and Shrewsbury 123; amongst the rural districts Burford 192, Church Stretton 118, and Teme 167.

As previously pointed out these rates for one year are not of great significance. It is however of great importance that one should have a reliable guide as to the infantile mortality in the various districts, and for this purpose the following table has been got out giving the average infantile mortality in each district for the last nine years, and the percentage above or below the average for the urban and rural districts.

Table 7.

AVERAGE INFANTILE MORTALITY IN THE URBAN AND RURAL DISTRICTS FOR THE NINE YEARS 1900—1908.

URBAN DISTRICTS.	Average of the Annual Infantile Rates per 1000 births for years 1900—1908	Percentage above or below the average for Urban Districts.	RURAL DISTRICTS.	Average of the Annual Infantile Rates per 1000 births for years 1900—1908	Percentage above or below the average for Rural Districts.
Bishop's Castle ..	83	— 26.5	Atcham ..	89	— 3.3
Bridgnorth ..	112	— .88	Bridgnorth ..	88	— 4.3
Church Stretton ..	98	— 13.3	Burford ..	64	— 30.4
Dawley	113	0.0	Chirbury ..	83	— 9.8
Ellesmere	100	— 11.5	Church Stretton ..	95	+ 3.3
Ludlow	109	— 3.5	Cleobury Mortimer ..	92	0.0
Newport	107	— 5.3	Clun ..	99	+ 7.6
Oakengates	132	+ 16.8	Drayton ..	114	+ 23.9
Oswestry	99	— 12.4	Ellesmere ..	98	+ 6.5
Shrewsbury	130	+ 15.0	Ludlow ..	86	— 6.5
Wellington	104	— 8.0	Newport ..	109	+ 18.5
Wem	97	— 14.1	Oswestry ..	97	+ 5.4
Wenlock	101	— 10.6	Shifnal ..	91	— 1.1
Whitchurch	106	— 6.2	Teme ..	122	+ 32.6
			Wellington ..	89	— 3.3
			Wem	67	— 27.2
			Whitchurch ..	60	— 34.8

Even for this extended period the figures cannot be used for very positive deductions with respect to small districts of one or two thousand inhabitants, but for the average sized districts of eight thousand and upwards, deductions may with some certainty be drawn.

For the nine years, Oakengates and Shrewsbury were the only urban districts with infantile death-rates above the average. The comparatively high infantile mortality in Shrewsbury is, in the opinion of Dr. Reynolds, intimately associated with defective housing conditions. With regard to Oakengates the following remarks taken from my report for 1907 are still applicable with the observation that Dr. Rose states that the scavenging has been greatly improved:—“In Oakengates the cause is not so obvious. Only a comparatively small part of the district presents any features of crowding of houses on area. The houses are to a great extent scattered, and are so situated as to allow of a good circulation of air around them. It is true, however, that a considerable proportion of the houses present sanitary defects of a more or less grave character, and that the scavenging, although improved, leaves much to be desired; also that until recently there was no satisfactory water supply or sewerage system. Nevertheless it appears probable that much of the excess of the mortality is due to the habits of the people, and that the district is one eminently suited to the adoption of the Notification of Births Act. The adoption of the Act would necessarily, if it is to be of use, be accompanied by provision for visiting and teaching the mothers in their own homes. It must, however, be remembered that for the year 1907 the infant mortality rate for Oakengates was only 92, and this comparatively low rate followed on a considerable reduction in the previous year. Dr. Rose attributes this diminution to a great extent to the supervision and instruction given by the County Council under the Midwives Act. Whether the improvement is really a permanent one or is a temporary variation common in small districts remains to be seen.”

The low infantile mortality in Oakengates for 1907 was not maintained in 1908, being for that year 128.

Amongst the rural districts those with the highest average rates were Teme, Drayton and Newport. Teme is a very small district and consequently liable to great variations, but its persistently high rate would suggest the advisability of investigation.

The high infantile mortality of Drayton has been reported upon by the District Medical Officer of Health, and during the last three years the rate has been comparatively low.

The Newport Rural rate is distinctly above the average of the rural districts, and in all probability this is due to the higher rate in the mining and manufacturing part of the district.

The following extracts from the reports of the District Medical Officers of Health bear upon the infant mortality in the districts and the measures taken or recommended to lessen it.

Burford Rural. “There were five deaths of infants under one year of age, against none in the two previous years. This is equal to an infantile mortality rate of 192.”

“Two of these were due to premature birth of twins and two to diarrhoeal diseases, and one to bronchitis.”

“When dealing with such small numbers the addition of one or two deaths makes the mortality rate seem very excessive, but taking a five years’ average, including 1908, the rate is 66.”

Dawley Urban. “The rate for the year is a high one. It was no doubt raised a good deal by epidemic prevalence of measles, 3 deaths being directly due to this cause, and no less than 10 deaths being due to bronchitis against 2 from the same cause in 1907. These must be considered as to some extent ‘preventable,’ if due care were taken in nursing measles and protecting the affected children from exposure. Other preventable deaths are those from diarrhoeal disease, wasting disease and convulsions, if parents had adequate training and knowledge in the feeding and care of infants.”

Ludlow Rural. “There were 23 deaths of infants under one year, against 10 last year, this gives an infantile mortality rate of 100. A significant fact in connection with these deaths is that nearly half of them, viz., 11, were due to premature birth, and for the last three years this has been the chief cause of mortality in infants. Most of these occur in the Clee Hill district, and is certainly not due to the work done by the women in the late months of their pregnancy. I am afraid that the want of a sufficient number of properly trained midwives may be to some extent responsible for it.”

Newport Rural. "The more satisfactory rates of 1906 and 1907 were not maintained. The heavier rate of last year may be ascribed to measles and whooping cough, which directly caused 4 infant deaths; 4 more being due to pneumonia and very probably associated with these diseases. The district has an average infant mortality rate above that of rural England."

Shrewsbury Borough. "It may be hoped that this step (adoption of Notification of Births Act and appointment of Health Visitor) will have a good effect in reducing infantile mortality in the Borough, but there is not likely to be any great reduction until the housing conditions in Frankwell and the adjoining part of the old town are improved."

Wem Rural. "There is, throughout the district, greater care taken in the rearing of infants than formerly, this is, I think, due to the fact that we have a better class of midwives who are able to instruct mothers how to feed and clothe their infants."

Dealing with the County as a whole it will be seen by reference to Table V. (urban and rural) that many of the deaths were from causes of a preventable nature. In order to form a clear conception of the number of deaths from preventable causes, these have been extracted and classified according to their probable causation. It is not suggested that even with the greatest care the whole of these deaths might have been prevented, but there can be no doubt that with reasonable care and knowledge they would have been lessened by a very large percentage.

(1) Infantile deaths, of which a considerable proportion were no doubt due to errors of feeding.

	URBAN DISTRICTS.	RURAL DISTRICTS.	WHOLE COUNTY.
Diarrhoea, all forms	11	6	17
Enteritis (not tuberculous)	13	18	31
Gastritis and Gastro-intestinal Catarrh	6	1	7
Atrophy, Debility, Marasmus	48	44	92
Want of Breast Milk	3	0	3
Convulsions	27	32	59
Total	108	101	209

(2) Infantile deaths, a considerable proportion of which were due to improper clothing, exposure to cold, exposure to infection, and general want of attention to the laws of health:—

	URBAN DISTRICTS.	RURAL DISTRICTS.	WHOLE COUNTY.
Infectious Diseases	24	13	37
Bronchitis	40	25	65
Pneumonia	41	24	65
Total	105	62	167

(3) Infantile deaths due to a great extent to a want of care on the part of the mother for her own health:—

	URBAN DISTRICTS.	RURAL DISTRICTS.	WHOLE COUNTY.
Premature Births	44	66	110

(4) Infantile deaths due to tuberculous infection:—

	URBAN DISTRICTS.	RURAL DISTRICTS.	WHOLE COUNTY.
	6	11	17

II. (URBAN).

CAUSES OF DEATHS IN AGE PERIODS DURING YEAR 1908, IN THE URBAN DISTRICTS OF SHROPSHIRE.

CAUSE OF DEATH.	TOTAL DEATHS IN URBAN DISTRICTS IN AGE PERIODS.							CAUSES OF DEATH IN THE DIFFERENT URBAN DISTRICTS.													
	All Ages.	Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Bishop's Castle.	Bridgnorth.	Church Stretton	Dawley	Ellesmere.	Ludlow.	Newport	Oaken-gates.	Oswestry	Shrewsbury.	Welling-ton.	Wem.	Wenlock	Whit-church.
Small-pox .. .. .. .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles	29	6	20	2	1	..	..	..	..	..	9	..	6	..	11	1	..	..	..	1	1
Scarlet Fever	10	2	3	3	1	1	..	..	..	..	..	..	..	..	1	..	6	1	..	2	2
Whooping Cough	23	16	7	..	..	..	..	..	..	..	1	..	..	4	3	..	10	3	..	2	2
Diphtheria and Membranous Croup	19	..	6	12	1	..	..	..	..	..	1	..	..	..	3	..	8	2	..	1	2
Croup	5	2	3	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..
Typhus Fever .. .. .. .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever	3	..	..	..	..	1	2	..	..	1	..	..	..	..	..	..	2	..	..	..	..
Continued Fever .. .. .. .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Epidemic Influenza	51	7	1	1	..	13	29	1	..	..	2	..	1	1	9	3	18	2	1	10	3
Cholera .. .. .. .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Plague .. .. .. .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhoea	19	12	2	1	..	..	4	..	1	..	1	..	..	..	1	1	10	2	..	3	..
Enteritis	24	18	3	..	1	..	2	..	4	..	2	2	..	..	3	2	3	1	..	6	1
Puerperal Fever	4	..	..	..	1	3	..	1	..	..	..	..	..	..	..	..	2	..	..	1	..
Erysipelas	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Septic Diseases .. .. .. .. ..	..	..	..	..	..	..	..	..	..	..	5	3	14	5	9	6	37	10	1	16	5
Phthisis	120	..	3	4	20	87	6	3	6	..	..	..	..	..	7	9	8	5	..	7	2
Other Tubercular Diseases	50	7	12	10	8	13	..	1	2	..	3	..	5	1	12	13	29	9	3	20	8
Cancer—Malignant Disease	120	..	..	..	6	54	60	2	6	..	7	4	6	1	8	10	40	4	5	21	5
Bronehitis	137	38	12	1	..	23	63	2	8	2	16	1	7	1	3	19	6	22	11	..	13
Pneumonia	98	34	20	4	2	18	20	..	7	1	9	2	1	3	19	6	2	..	..	1	..
Pleurisy	3	..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	16	2	..	1	..
Other Diseases of Respiratory Organs	21	5	..	2	..	5	9	..	..	..	..	..	..	..	2	1	6	2	..	2	1
Aleoholism—Cirrhosis of Liver	22	..	..	..	..	16	6	1	..	..	..	..	1	..	5	1	6	1	4	2	1
Venereal Diseases	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..	2
Premature Birth	52	52	..	..	..	..	..	..	2	..	6	2	5	1	6	6	11	1	2	8	2
Diseases and Accidents of Parturition	6	..	..	..	..	6	..	..	..	2	..	..	..	..	1	1	..	..	..	33	19
Heart Diseases	211	2	1	8	4	84	112	2	6	2	15	4	21	1	15	19	60	13	1	33	19
Accidents	49	5	6	3	6	21	8	..	1	..	3	..	4	2	5	2	18	1	1	11	1
Suicides	13	..	..	..	1	9	3	..	2	1	..	..	2	2	2	..	2	1	..	3	..
All other Causes	636	101	24	13	11	175	312	13	49	1	41	24	44	18	68	58	163	44	21	71	21
TOTALS	1727	308	123	64	63	534	635	26	95	7	123	42	116	48	190	138	476	113	39	235	79

II. (RURAL).
CAUSES OF DEATHS IN AGE PERIODS DURING YEAR 1908, IN THE RURAL DISTRICTS OF SHROPSHIRE.

CAUSE OF DEATH.	TOTAL DEATHS IN RURAL DISTRICTS IN AGE PERIODS.							CAUSES OF DEATH IN THE DIFFERENT RURAL DISTRICTS.																
	All Ages.	Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Atcham.	Bridgnorth.	Burford.	Chirbury	Church Stretton	Cleobury Mortimer.	Clun.	Drayton	Ellesmere.	Ludlow.	Newport	Oswestry	Shifnal.	Teme.	Wellingt.	Wen.	Whitchur.
Small-pox	
Measles	13	5	6	2	2	1	..	2	1	2	2	1	..
Scarlet Fever	4	..	3	1	3	1	..
Whooping Cough	17	10	6	1	2	4	1	6	..
Diphtheria and Membranous Croup	17	..	4	10	2	..	..	1	5	..	..	3	..	..	1	..	..	2	..	
Croup	2	1	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..
Typhus Fever	
Enteric Fever	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Continued Fever	
Epidemic Influenza	43	4	1	2	2	13	21	15	3	2	5	1	..	2	5	2	1	..
Cholera	
Plague	
Diarrhoea	10	7	2	..	..	1	..	1	..	..	..	..	2	..	..	3	1	1	..	
Enteritis	29	17	4	..	..	4	4	4	1	..	2	..	1	6	5	1	1	..	6	
Puerperal Fever	3	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas	2	1	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..
Other Septic Diseases	
Phthisis	110	1	1	6	21	79	2	16	6	..	5	6	14	3	12	6	7	6	7	10
Other Tubercular Diseases	55	11	14	7	8	14	1	9	1	..	..	1	6	1	7	3	..	15	2	
Cancer—Malignant Disease	143	..	..	..	7	65	71	27	8	3	4	5	6	4	14	7	6	9	23	
Bronchitis	122	25	6	2	..	17	72	15	5	1	4	1	12	5	11	4	5	14	7	
Pneumonia	121	27	22	6	5	34	27	17	7	..	2	6	10	6	13	4	8	10	15	
Pleurisy	3	..	1	..	..	1	1	..	..	..	..	..	..	1	..	..	..	..	..
Other Diseases of Respiratory Organs	7	2	..	..	..	2	3	1	..	..	..	..	2	..	1	..	..	..	..
Aleoholism, Cirrhosis of Liver	13	..	..	..	..	7	6	1	..	..	..	..	1	3	2	..	..	..	..
Venereal Diseases	2	1	..	..	..	..	1	1	..	..	..	..	..	..	1	..	..	..	..
Premature Birth	65	65	..	..	..	..	..	2	1	2	..	2	3	..	5	11	3	6	2	
Diseases and Accidents of Parturition	17	4	..	..	1	12	..	2	1	2	..	1	1	1	..	1	1	1	..	
Heart Diseases	262	5	2	4	7	86	158	33	16	6	10	10	6	19	28	18	15	14	34	
Accidents	65	1	8	7	6	26	17	13	9	1	1	..	6	1	3	3	8	4	..	
Suicides	19	..	..	..	2	13	4	4	1	1	1	..	2	2	2	..	1	..	2	
All other Causes	736	95	33	12	11	138	447	123	66	4	19	26	32	43	56	52	42	33	81	51
TOTALS	1881	282	114	60	73	516	836	298	133	19	50	66	107	95	167	117	103	102	214	108

The deaths from these causes which in a large measure may be considered as preventable numbered 85 per cent. of the whole. It is evident therefore that there is much scope for the reduction of the infantile mortality.

Reference to Table V. shows a very striking difference in the ages at death in the urban and rural districts. Whereas in the urban districts 24 per cent. of the deaths were under one week, in the rural districts 33 per cent. were under this age. Thirty-three per cent. of the deaths in the urban districts were under one month, whereas over 46 per cent. of the deaths in the rural districts were under one month. This somewhat extraordinary circumstance was pointed out in 1907 and 1906 reports, and in my report for 1907 I said "On the face of it, it seems probable that this excess of deaths under one week in rural districts is due to the difficulty of obtaining prompt medical assistance and to the unwillingness of midwives to send any considerable distance for medical help on account of illness of the child, unless the symptoms are very urgent. The result is that medical help is either not obtained at all or it is obtained when too late to be of use."

This matter has come prominently under my notice in the administration of the Midwives Act. The remedy is undoubtedly to strictly enforce the rules relating to sending for medical help, and to make it easy for the midwives to obtain medical help for poor persons.

Leaving aside the general removal of insanitary conditions which must have a great effect upon infantile mortality, particularly in towns, the reduction of the mortality must proceed on the following lines :—

- (1) The production of a clean milk supply free from tubercle.
- (2) The instruction of mothers in the feeding and care of infants, and similar teaching to the older girls in the elementary schools.
- (3) Securing better isolation and general attention to children whilst suffering from epidemic diseases, more particularly measles and whooping cough.
- (4) Strict enforcement of those provisions of the Midwives Act that specify when medical help shall be sent for.

It is hoped that the Milk and Dairies Bill, when it becomes law, will do much towards securing for the community a pure milk supply.

The Notification of Births Act gives Sanitary Authorities a most effective means of instructing mothers just at the time when such instruction is likely to be listened to, and to prove of value. So far the Act has only been adopted in Shrewsbury, and it is well to bear in mind that its adoption would be useless, unless provision is at the same time made for the necessary visits by some competent person. It is hardly reasonable to expect that in small districts a separate official should be appointed for this purpose, but it should be possible to arrange for the work to be carried on, at the expense of the Sanitary Authorities, by nurses already employed in ordinary district nursing work. As mentioned in the remarks under the Midwives Act, midwives are doing good work in explaining, so far as they are able, to mothers the correct method of feeding infants, and with better trained midwives this instruction will become much more valuable. The teaching of this subject to the older girls in the elementary schools is a matter that is likely to have attention shortly.

Under the heading of measles and whooping cough the question of better isolation and general attention to children suffering from these diseases is dealt with. There can be no doubt that the employment of a properly trained nurse to visit and instruct during epidemics of these diseases would save many lives.

Experience in the administration of the Midwives Act has clearly shown that there is much laxity amongst midwives with regard to sending for medical help on account of feebleness or illness of the child, and in consequence lives must frequently be sacrificed. By strictly enforcing the provisions of the Act great improvement may be expected in this respect.

CHIEF CAUSES OF DEATH.
Table 8.

	Urban Districts. 1908		Rural Districts. 1908		Whole County. 1908		1907		England and Wales 1907 Death- rates.
	Deaths.	Death- rates.	Deaths.	Death- rates.	Deaths.	Death- rates.	Deaths.	Death- rates.	
Seven Chief Zymotic Diseases	103	.94	62	.47	165	.68	194	.79	1.26
Phthisis	120	1.09	110	.83	230	.95	236	.97	1.14
Other forms of tuberculosis	50	.45	55	.41	105	.43	71	.29	.46
Bronchitis	137	1.25	122	.92	259	1.07	247	1.02	1.20
Pneumonia	98	.89	121	.91	219	.90	266	1.10	1.35
Heart Disease	211	1.92	262	1.97	473	1.94	438	1.81	1.47
Cancer	120	1.09	143	1.07	263	1.08	258	1.06	.91

The death-rates from the chief zymotic diseases and from phthisis of the rural districts were, as in previous years, considerably smaller than those of the urban districts.

AVERAGE ANNUAL DEATH-RATES PER MILLION, FOR CERTAIN DISEASES, IN GROUPS OF

YEARS FROM 1856—1907.
REGISTRATION COUNTY OF SHROPSHIRE.

Table 9.

PERIODS.	Small- pox.	Measles.	Scarlet Fever.	Diph- theria.	Whoop- ing Cough.	Typhus Fever.	Enteric Fever.	Con- tinued Fever.	Cancer.	Phthisis.
1856—1860	129	206	546	245	339	*	617	*	—	2306
1861—1870	112	277	548	232	298	*	644	*	—	2169
1871—1880	78	186	518	190	271	33	246	75	—	1640
1881—1885	10	147	323	207	244	8	168	17	626	1377
1886—1890	1	213	79	125	319	5	127	5	782	1359
1891—1895	3	163	132	209	240	1	92	.7	847	1144
1896—1900	.7	161	65	210	234	0	82	1	953	1028
1901—1907	.2	164	52	119	243	0	32	0	1023	961

*In these years Typhus, Enteric and Continued Fevers were not differentiated.

This Table, the significance of which I pointed out in previous reports, has been brought up to date.

The striking points are the increase of the death-rate from cancer and the decrease of that from phthisis; the very extraordinary decrease of the death-rates from scarlet fever and enteric fever; the very slight decrease in the rates from whooping cough and measles, and the slight decrease in the rate from diphtheria, compared with that from scarlet fever and enteric fever. The result is a complete reversal of the order of importance of the diseases viewed from the number of deaths they cause. Whereas in the early periods scarlet fever and enteric fever were the most fatal of the infectious diseases, now the most fatal of these diseases are whooping cough, measles and diphtheria. The prevention of these diseases, and particularly the lessening of the case mortality is one of the most promising fields of action for the saving of life, and they should undoubtedly receive more careful attention in the future.

II. (URBAN).

OF INFECTIOUS DISEASE NOTIFIED IN 1908 IN URBAN DISTRICTS

fever ; the very slight decrease in the rates from whooping cough and measles, and the ~~small~~ decrease in the rate from diphtheria, compared with that from scarlet fever and enteric fever. The result is a complete reversal of the order of importance of the diseases viewed from the number of deaths they cause. Whereas in the early periods scarlet fever and enteric fever were the most fatal of the infectious diseases, now the most fatal of these diseases are whooping cough, measles and diphtheria. The prevention of these diseases, and particularly the lessening of the case mortality is one of the most promising fields of action for the saving of life, and they should undoubtedly receive more careful attention in the future.

(RURAL.)

INFECTIOUS DISEASE NOTIFIED IN 1908 IN RURAL DISTRICTS.

NOTIFIABLE DISEASES.	CASES IN RURAL DISTRICTS IN AGE PERIODS.								TOTAL CASES NOTIFIED IN EACH DISTRICT.																
	Age Periods.								1	2	3	4	5	6	7	8	9	10	11	12	13	14			
	At all Ages.	Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards		Ateham.	Bridgnorth.	Burford.	Chirbury.	Church Stretton.	Cleobury Mortimer.	Clun.	Drayton.	Ellesmere.	Ludlow.	Newport.	Oswestry.	Shifnal.	Teme.			
Small-pox	1	..	..	1	..	..		..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
Cholera		
Diphtheria	146	..	25	83	20	18	..	17	5	7	..	6	14	7	13	21	14	..	23	..	5	5		
Membranous Croup									8	1	10	3	2	..	6	3	8	1	..	3	4	
Erysipelas	50	..	1	2	4	33	10		52	11	1	1	10	16	3	6	3	46	2	23	48	3	7	
Scarlet Fever	262	2	60	165	16	19	..		..	..	..	..	..	..	..	..	..	..	..	..	..	16	
Typhus Fever		
Enteric Fever	11	..	..	3	3	5	..	4	..	..	..	1	1	1	1	1	1	1	..	..	..	..
Relapsing Fever		
Continued Fever		
Puerperal Fever	9	..	..	..	..	9	..	1	..	..	..	..	..	1	..	2	..	..	..	..	..	5	
Plague		
TOTALS ..		479	2	86	253	44	84	10	82	17	8	1	17	41	15	23	25	69	6	54	49	88	15	26	23
Measles	219	17	92	99	6	5	219	..	
Phthisis	
Chicken-pox	
Cerebro-spinal Meningitis ..	1	1	1	

fever; the very slight decrease in the rates from whooping cough and measles, and the ~~small~~ decrease in the rate from diphtheria, compared with that from scarlet fever and enteric fever. The result is a complete reversal of the order of importance of the diseases viewed from the number of deaths they cause. Whereas in the early periods scarlet fever and enteric fever were the most fatal of the infectious diseases, now the most fatal of these diseases are whooping cough, measles and diphtheria. The prevention of these diseases, and particularly the lessening of the case mortality is one of the most promising fields of action for the saving of life, and they should undoubtedly receive more careful attention in the future.

INFECTIOUS DISEASES.

The death-rate from the seven common infectious diseases was .68, compared with .79 in 1907, .88 in 1906, .64 in 1905, and 1.0 in 1904.

Table 10.

ANALYSIS OF DEATHS AND DEATH-RATES FROM THE COMMON INFECTIOUS DISEASES.

	Seven chief Zymotic Diseases.		Small-pox.		Scarlet Fever.		Typhoid Fever.		Diphtheria.		Measles.		Whooping Cough.		Diarrhoea.	
	Deaths	Death- rates.	Deaths	Death- rates.	Deaths	Death- rates.	Deaths	Death- rates.	Deaths	Death- rates.	Deaths	Death- rates.	Deaths	Death- rates.	Deaths	Death- rates.
Urban Districts ..	103	.94	0	.00	10	.09	3	.03	19	.17	29	.26	23	.21	19	.17
Rural Districts ..	62	.47	0	.00	4	.03	1	.01	17	.13	13	.10	17	.13	10	.08
Whole County ..	165	.68	0	.00	14	.06	4	.02	36	.15	42	.17	40	.16	29	.12
England and Wales ..		1.29		.00		.08		.07		.15		.22		.27		.50
England and Wales less 218 towns ..		.99		.00		.06		.07		.15		.13		.25		.33
NOTIFICATIONS					Case Mortal- ity per cent.	Cases.	Case Mortal- ity per cent.	Cases.	Case Mortal- ity per cent.	Cases.	Case Mortal- ity per cent.					
Urban Districts ..			0	0	434	2.3	18	16.7	191	10.0						
Rural Districts ..			1	0	262	1.5	11	9.1	146	11.6						
Whole County ..			1	0	696	2.0	29	13.8	337	10.7						

A fair comparison with the County of Salop is England and Wales less 218 towns. It will be seen that owing to lower rates from diarrhoea, whooping cough, and typhoid fever, the zymotic rate of the County is considerably below that of England and Wales, less 218 towns.

Small-pox. One case of small-pox was notified in the Drayton Rural District, and was removed to the Hospital on Prees Heath.

Scarlet Fever. There were 14 deaths from scarlet fever compared with 9 in 1907 and 14 in 1906. The number of cases was 696, compared with 396 in the previous year, the increase being to a great extent due to epidemic prevalence in the Borough of Shrewsbury, where 225 cases occurred. The cases on the whole were of a mild type, the case mortality being 2 per cent. in the urban districts 2.3, in the rural districts 1.5. The urban districts principally affected were Shrewsbury (225), Whitchurch (61), and Bridgnorth (37); and the rural districts Shifnal (48), Ludlow (46), Whitchurch (14), and Atcham (52).

There is frequent reference in the reports to the mildness of the disease and its consequent spread from overlooked cases.

The only districts in which hospital isolation was practised to any considerable extent were Bridgnorth Urban District and Drayton Rural District.

In the Oswestry Rural District one case of scarlet fever and 2 cases of diphtheria were traced to patients discharged from scarlet fever wards of hospitals outside the County.

Measles. There were 42 deaths from measles compared with 57 in 1907, 15 in 1906, 32 in 1905, and 54 in 1904. Again it was principally in the urban districts that the deaths occurred, Dawley, Ludlow and Oakengates being the districts mostly affected. The number of deaths from this disease and from whooping cough probably far exceeds those actually returned under these headings, and to get an approximate idea of the mortality caused by these diseases one must add in any epidemic the excess, over the normal mortality, of deaths from bronchitis and pneumonia. As Dr. Gepp has pointed out in several of his reports the mortality estimated in this way is often very high, and justifies special measures being taken to reduce it.

The following paragraphs are taken from my report for 1907 :—

Measures that have been taken to prevent the spread of measles in the past have not been very successful, and the success of even improved methods may not be very conspicuous, particularly in towns. On the other hand, there can be no doubt that by energetic steps taken during an epidemic the mortality may be greatly lessened, as most of the deaths from measles are due to carelessness and ignorance. If during an epidemic, nurses were employed to visit the cases daily and see that they were properly cared for, and particularly that they were not allowed to be exposed, a very large saving of life would result. As so far, we have failed to limit the spread of measles to any considerable extent, and the number of deaths caused by this disease as shown by Table 9 is still very large, it is very desirable that every available means should be taken to lessen the case mortality. As an aid to this work it is of the utmost importance that the clauses of the Public Health Act, 1875, and the Infectious Disease (Prevention) Act, 1890, relating to infectious diseases should be made to apply to measles, without declaring it a notifiable disease.

This matter was brought to the notice of the Shropshire Nursing Federation and the suggestion made that they might supply nurses to the Sanitary Authorities on terms to be arranged, and as a preliminary the following letter was sent by the Superintendent of the Federation to every Medical Officer of Health in the County :—

“ The County Medical Officer of Health has brought before the Shropshire Nursing Federation the great need there is for some provision for the nursing and general supervision of cases of measles and whooping cough in order to reduce the large mortality from these diseases. Reference to this matter will be found on pages 17 and 18 of his Annual Report for 1906.

“ The difficulty at present seems to be that Sanitary Authorities have no one they can employ for this work, and as it is of a very intermittent character, intervals between epidemics being often as much as two or three years, they no doubt would not consider the engagement of anyone permanently. The suggestion made to the Federation is that they shall supply nurses to Sanitary Authorities during epidemics at certain fixed charges.

“ The duties of such a nurse would be, working directly under the supervision of the Medical Officer of Health of the District, to obtain lists of infected houses from the schools and to visit these houses daily or as often as possible. She would carry out what nursing might be required, but would more particularly devote herself to improving isolation, preventing exposure and generally remedying those defects in household management that are generally responsible for the fatal complications in these cases. I shall be glad to hear from you as to—

- (1) Whether you approve of the suggestion personally.
- (2) Whether you think your Sanitary Authority would be likely to avail themselves of the opportunity of obtaining nurses for this purpose.

“ Before taking any steps the various Sanitary Authorities in the County would be communicated with, but it is felt that unless the scheme had the cordial support of the Medical Officers of Health it could not possibly succeed.”

The replies were almost without exception favourable.

A communication was then sent to the Sanitary Authorities pointing out the uses of such a nurse and asking if they would be disposed to utilise a nurse for this purpose during an epidemic if one were available.

The answers were in eight cases favourable to the scheme, and a nurse is now engaged to undertake this work.

It is a great pity that all the authorities have not availed themselves of this opportunity. A nurse employed in this work and working under the direction of the Medical Officer of Health would rapidly become specially skilled and of the greatest possible use. There can be no doubt that a large number of lives would be saved and at a comparatively small expense. The difficulty in carrying out this work has been, that the diseases come in sudden bursts, with intervals of quiescence of one or two years, and that the permanent staff is quite unable to cope with the work entailed. It is obviously impossible for an authority to keep inspectors, or nurses or health visitors in readiness for such an emergency, and consequently the work remains undone. The offer of the Federation shows a cheap and efficient way of carrying out this work. In his report on the Borough of Wenlock Dr. Gepp says :—“ The Town Council had under consideration the suggestion of the Shropshire Nursing Federation for the supply of a trained nurse in times of epidemics of measles or whooping cough, to visit cases and by advice and assistance to do what is possible to lessen the loss of life caused by these diseases. I strongly supported the suggestion but the Council decided not to adopt it. I am quite sure that action of the kind proposed is urgently called for. Measles and whooping cough recur at short intervals in all populous places, and their prevention is quite beyond the present power of sanitary science. They cause a serious loss of life among young children, and leave many who recover in a seriously weakened state and liable to further damage, or death, from various diseases. The Borough has suffered severely in past years from these epidemics, especially in Madeley and Broseley Wards. Since 1900 measles has caused 47 deaths, and whooping cough 31 deaths, against 7 deaths caused by scarlet fever and 27 by diphtheria. Many more deaths could be charged to measles and whooping cough, as when these diseases are prevalent the deaths from bronchitis and pneumonia always rise markedly. The fatality of these diseases is no doubt largely due to the want of knowledge and care on the part of parents, neglecting to take proper care to isolate the children affected, to guard their children from contact with cases, and to prevent exposure of those affected to chills and cold. The services of a trained nurse to go among the cases, advise as to isolation and nursing, and as to the dangers of neglect, would be invaluable, and no other action open to a Sanitary Authority would be likely to have as good results.”

Again in his report on the Dawley Urban District he says :—“ Nine deaths were directly due to measles, and 11 children under five years of age died from bronchitis, and 7 from pneumonia, diseases which are very liable to follow on measles and whooping cough. This heavy mortality from a disease which is not generally regarded as serious, but which actually is far more fatal than scarlet fever or diphtheria, gives much weight to the recommendation I made to the Council last year to adopt the suggestion and proposal of the Shropshire Nursing Federation for the supply, temporarily and when required, of a nurse to visit infected houses, and give advice and assistance in nursing, securing such isolation as is possible, and preventing exposure of the patients to chill. There is no question as to the value such action would have in lessening the loss of life which is caused mainly by ignorance as to proper treatment and nursing required. The Council will, I trust, in future, see the necessity for taking advantage of the suggestion made. The cost is relatively trifling, amounting to 35/- per week, and small travelling expenses. Very much good might be done in a month during an epidemic, and I know of no other available way in which the Council could effect the same purpose.”

It is to be hoped that this most important movement will extend, and that nurses will in time be used for this purpose by all the Sanitary Authorities in the County.

I have received notice of the closure of 71 schools on account of measles. In the majority of cases the closure was rather a matter of educational convenience than for the prevention of disease.

School closure in towns, however applied, seems to have been to a great extent a failure, so far as stopping the spread of the disease is concerned. There is not yet sufficient evidence to show what the effect of closure rationally applied would be in country districts. I would suggest that wherever the necessary information is forthcoming that schools be closed on the following lines:—

- (1) That schools be closed after the first case of measles for a period of 7—10 days, the closure to commence about 7 days after the onset of the first case.

(This method of closure is fully explained in my report for 1904).

- (2) That class closure instead of school closure be practised when it appears advantageous according to local circumstances.

For this purpose and for the proper supervision of cases by nurses, a prompt system of notification from schools is necessary. A scheme has been drawn up and submitted to the Education Authority and will shortly be in working order. For the intelligent application of closure it is desirable that the measles history of each child should be known, and to some extent this is already available through the records of the medical inspection.

Whooping Cough. There were 40 deaths from whooping cough compared with 27 in 1907, 90 in 1906, and 24 in 1905. Twenty-three of the deaths were in the urban districts and 17 in the rural districts. There were 6 deaths in the small district of Teme causing the extraordinary high rate of 3.2 per 1000.

My remarks with regard to the difficulty of preventing the spread of measles are applicable perhaps even to a greater extent with regard to whooping cough. As reference to Table 9 shows, whooping cough now causes far more deaths than any other of the common infectious diseases. From the nature of the disease, particularly its prolonged infective period, it is under the control of sanitary authorities to a smaller extent even than measles, yet there can be no doubt that by similar measures to those which are suggested for measles, the case mortality could be greatly reduced and a large number of lives saved.

Diphtheria. There were 337 cases of diphtheria with 36 deaths, compared with 315 cases and 31 deaths in 1907. The urban districts principally affected were Shrewsbury (71), Oswestry (28), Ellesmere (18), and Whitchurch (20). The rural districts mostly affected were Ellesmere (21), Oswestry (23), and Cleobury Mortimer (14).

The case mortality rate was slightly higher than last year, and was higher in the rural districts than in the urban districts. It has been clearly proved that the mortality of diphtheria depends almost entirely upon the efficiency of the treatment with antitoxin. If a sufficient dose of antitoxin can be given on the first day of illness the mortality is reduced to an extremely small point. Unfortunately a medical man is frequently not called in until the second or third day, or even later, but it is extremely desirable that when medical help is obtained, antitoxin treatment should be applied in all cases without *any delay whatever*. With this end in view several Sanitary Authorities have on the recommendation of the Medical Officers of Health decided to pay the fees for this treatment in the case of poor persons. It seems probable that the higher case mortality in rural districts is due to difficulties in the way of prompt treatment with antitoxin in remote country districts, particularly as the case mortality in other infectious diseases is mostly higher in the urban districts.

In previous reports I have entered into the question of school closure on account of diphtheria, and have shown that with efficient inspection, schools should not be closed except in rare instances for this disease. One may take it as a fact, that when diphtheria is spreading in a school there are one or more infective children attending. These children may remain infective for long periods and it should be one's object to discover them. If the school is closed it becomes practically impossible to find out the source of infection and so render it harmless, and consequently when the school is re-opened the infection is frequently introduced again. If however, from inability to carry out the method suggested, schools are closed to prevent the spread of diphtheria, special precautions should be taken when they are re-opened. None of the known infected children should be allowed to return to school until their throats have been examined bacteriologically and declared free from infection. The school children should be examined on the day of opening and swabs should be taken from any children to whom any suspicion is attached.

If the following measures are taken there should, in the large majority of instances, be no difficulty in controlling an outbreak of diphtheria without school closure :—

- (1) Whenever two or more cases of diphtheria occur in a school within a limited period, to cause an inspection to be made and swabs taken from the throats of all children who appear likely to have been the cause of the outbreak. In some instances it may be necessary to examine all the children in the infected class, but in most instances it will suffice to examine (a) all children who have been recently absent from unexplained causes or minor ailments, (b) children with discharge from the nose or ears, or suffering from other conditions not infrequently left by diphtheria, (c) children who habitually breathe through their mouths, (d) children who are known to have been in contact with diphtheria, (e) children who have recently had sore throat, however slight. It is necessary also to inquire into the absentees.
- (2) To insist as a matter of routine that a person cannot be declared free from infection until the throat has been found free from diphtheria bacilli.
- (3) Whenever satisfactory isolation cannot be provided, to protect the rest of the family by small injections of antitoxin.

The Education Committee has issued an instruction that children who have suffered from diphtheria should not be allowed to return to school until their throats have been declared free from diphtheria bacilli.

Arrangements have now been made by which all cases of diphtheria will be notified to the County Medical Officer of Health, who will then exclude them until their throats have been examined and declared free from diphtheria bacilli.

The following quotations from the District Medical Officers' Reports deal with outbreaks and the measures adopted or recommended to prevent their spread :—

Cleobury Mortimer. " Five at Cleobury Mortimer in June and July and three in November and December. These cases were not connected with the school, they are one of the indirect results of the want of proper scavengage and drainage in the town."

Oakengates. " Two cases, one in an adult and one at 4 years with death occurring in the New Buildings, where the closet pail system exists within four to five feet from the back doors of the houses.

Shrewsbury. "There was no special evidence of school infection until March, when a series of five cases occurred in connection with Trinity Schools. By the advice of Dr. Gepp these schools were placed under medical supervision, routine visits to the school and inspection and swabbing of suspicious throats being made. The effect was very good, three children were found with diphtheria bacilli, and were excluded from school. No further case occurred in this connection till the end of May."

"During the second half of the year 42 more cases were notified, the main incidence being still in the same districts. There was, however, no particular evidence of school influence. In addition to the usual precautions and visits to schools, the Sanitary Committee continued to defray the cost of antitoxin treatment in necessitous cases, and to pay for protective inoculation of children in infected houses, and special handbills of caution were distributed to parents by means of the schools whenever this course appeared desirable."

Whitchurch Urban District. "Six cases that occurred at intervals during February and March had a definite association with the infant department of the Wesleyan School. I visited the school on March 16th, and took swabs from the throats of four children as to whom I had suspicions. One of these was returned as showing diphtheria bacilli. This child, it seemed likely, had been the source of four other cases in the same class-room, and of one other case outside the school. He was excluded and no further case occurred in this school for nearly three months."

Whitchurch Rural. For the results of an outbreak in this district see Part II. of the Report, page .

Enteric or Typhoid Fever. There were 29 cases and 4 deaths from typhoid fever, compared with 33 cases and 6 deaths in 1907, and 43 cases and 9 deaths in 1906. More than one-third of the cases occurred in the Borough of Shrewsbury, the only other urban districts affected being Ludlow (4), Bridgnorth (3), and Oswestry (1). Not more than one case occurred in any rural district with the exception of Atcham.

The origin of the cases of enteric fever appears to have been definitely traced in very few instances. In four of the cases the infection was imported from outside the County.

The decrease of typhoid fever in this County as shown in Table 9 is a matter for much congratulation. What exactly the decrease is due to, is not apparent, but the causes are probably many, and may be summed up as improved conditions of living and more careful living. The improvement of water supplies is probably the most important factor, and it must be remembered that this improvement may extend far beyond the area of the supply. The typhoid fever in country districts depends to a great extent on imported cases and the chances of infection from them. In districts supplied from shallow well waters liable to pollution, immunity from typhoid is dependent upon freedom from imported cases. It will readily be understood therefore how decrease of typhoid fever in country districts may be to a great extent due to a decrease in the neighbouring towns. Some part of the decrease too may be due to the more careful supervision of oyster and mussel beds that is now exercised.

Diarrhoea. There were 29 deaths classified as diarrhoea compared with 64 in 1907, and 60 in 1906. The death-rate from this disease was .12 compared with .50 for England and Wales and .33 for England and Wales less 218 towns.

The above figures, apparently so favourable to this County, and so favourable for 1908, compared with previous years are unfortunately not comparable. Owing to changes of instructions sent out by the Local Government Board, deaths from enteritis under one year of age have at one time been entered under diarrhoea and at another time not.

The following table satisfactorily compares the years 1906, 1907, and 1908 :—

	1906			1907			1908		
	Under 1 year.	Over 1 year.	Total.	Under 1 year.	Over 1 year.	Total.	Under 1 year.	Over 1 year.	Total
Diarrhoea	47	13	60	56	8	64	19	10	29
Enteritis	6	18	24	0	25	25	25	28	53
Total	53	31	84	56	33	89	44	38	82

This table shows that there was only a slight decrease of diarrhoeal deaths in 1908. Of 33 deaths in the urban districts due to diarrhoea and enteritis 13 were in the Borough of Shrewsbury and 9 in the Borough of Wenlock.

The measures which will reduce the amount of infantile diarrhoea are the provision of a clean and fresh milk supply, the teaching of correct methods of infant feeding, particularly the necessity for breast feeding, and cleanliness both household and municipal.

Puerperal Fever. Fifteen cases of puerperal fever (9 in the rural districts and 6 in the urban districts) were notified, with 7 deaths, compared with 13 cases and 7 deaths in 1907. These cases were all inquired into carefully by myself or my inspector, and further details of them so far as they relate to the practice of certified midwives will be found under the chapter on the Midwives Act.

There is reason to believe that many cases of puerperal infection still remain unnotified, principally because the name 'puerperal fever' is associated in the minds of a considerable proportion of the medical profession with the graver forms of infection only. The Local Government Board state that they have no power to define the term. To act as a guide and as a working definition, the North-Western Branch of the Society of Medical Officers of Health, with the help of Sir Wm. Sinclair, drew up the following :—

" For the purpose of the Notification Acts, 1889 and 1899, the term 'puerperal fever' shall include all cases in which within seven days after the birth of the child, alive or stillborn, the mother shall have a rise of temperature exceeding 100.4°F. with quick pulse, maintained for a period exceeding 24 hours, without any obvious cause other than the puerperal state.

" It shall also include all cases in which, within seven days after the birth of a child, there has been the occurrence of rigor (with attendant illness) without any obvious cause other than the puerperal state."

This definition has been forwarded to all the Medical Officers of Health in the County, and except on one or two minor points there is almost unanimity. It only remains now to forward the definition to the practitioners of the County.

Cerebro-Spinal Meningitis. A case was notified in the Oswestry Rural District, but it appears to have been of a doubtful nature and it was not verified by bacteriological examination.

TUBERCULOSIS.

Table II.

	DEATH-RATES FROM PHthisis.										DEATH-RATES FROM OTHER FORMS OF TUBERCULOSIS.														
	5 years, 1896—1900					1901	1902	1903	1904	1905	1906	1907	1908	5 years, 1896—1900					1901	1902	1903	1904	1905	1906	1907	1908
Urban Districts	..	—	1.28	1.05	1.18	1.4	1.0	1.20	1.15	1.09	—	—	—	.46	.43	.54	.41	.37	.47	.27	.45	—			
Rural Districts	..	—	.75	.70	.86	.87	.92	.91	.83	.83	—	—	—	.36	.21	.32	.39	.28	.27	.31	.41	—			
Whole County	..	—	.98	.85	1.0	1.1	.96	1.04	.97	.95	—	—	—	.40	.31	.41	.40	.32	.36	.29	.43	—			
England & Wales	..	1.32	1.26	1.23	1.20	1.2	1.14	1.15	1.14	*	—	.58	.59	.50	.54	.54	.49	.49	.46	*	—				

* These rates are not yet available.

There was a decrease in the number of deaths from phthisis as compared with 1907, but an increase in deaths from other forms of tuberculosis. The districts with the highest rates from phthisis during the year were :—

Bishop's Castle ..	..	2.32	Ellesmere Urban ..	..	1.49
Cleobury Mortimer ..	..	2.14	Chirbury ..	..	1.41
Ludlow Urban ..	..	2.13	Church Stretton Rural ..	..	1.35
Newport Urban ..	..	1.61	Wellington Urban ..	..	1.32
Whitchurch Rural ..	..	1.58	Shrewsbury ..	..	1.23

Of these districts Bishop's Castle, Ludlow, Chirbury, and Wellington Urban had high phthisis rates in 1907.

In order to eliminate as far as possible the accidental variations due to the smallness of the figures dealt with, a table has been drawn up giving the average rates from phthisis for the last 9 years, and the percentage variation for each district above or below the average of the urban and rural districts.

Table 12.
AVERAGE PHthisis DEATH-RATE FOR NINE YEARS, 1900—1908.

URBAN DISTRICTS.	Death-rates for years 1900—1908	Percentage above or below the average for Urban Districts.	RURAL DISTRICTS.	Death-rates for years 1900—1908	Percentage above or below the average for Rural Districts.
Bishop's Castle ..	1.73	+ 50.4	Atcham ..	.98	+ 15.3
Bridgnorth ..	1.26	+ 9.6	Bridgnorth ..	.58	- 31.8
Church Stretton ..	.48	- 58.3	Burford ..	1.10	+ 29.4
Dawley ..	.92	- 20.0	Chirbury ..	1.22	+ 43.5
Ellesmere ..	1.02	- 11.3	Church Stretton ..	.85	0.0
Ludlow ..	1.39	+ 20.9	Cleobury Mortimer ..	.62	- 27.1
Newport ..	1.31	+ 13.9	Clun ..	.90	+ 5.9
Oakengates ..	.75	- 34.8	Drayton ..	.78	- 8.2
Oswestry ..	1.07	- 7.0	Ellesmere ..	.97	+ 14.1
Shrewsbury ..	1.30	+ 13.0	Ludlow ..	.58	- 31.8
Wellington ..	1.14	- 0.9	Newport ..	.86	+ 1.2
Wem ..	.65	- 43.5	Oswestry ..	.79	- 7.1
Wenlock ..	1.38	+ 20.0	Shifnal ..	.76	- 10.6
Whitchurch ..	.87	- 24.3	Teme ..	1.26	+ 48.2
			Wellington ..	.93	+ 9.4
			Wem ..	.92	+ 8.2
			Whitchurch ..	.52	- 38.8

It will be noticed that all the Boroughs have a high death-rate from phthisis. This no doubt is due in most cases to the large amount of old insanitary property not affording sufficient light, air space or ventilation. Perhaps the most striking rate is that of the Borough of Wenlock, considering the scattered character of much of the district. Of the rural districts, Chirbury is the only one calling for special remark, as the figures for Teme and Burford are too small for inferences. The high death-rate from phthisis in Chirbury has been attributed by the Medical Officer of Health to work in the mines, but apart from this cause it is probably due to the unsatisfactory housing conditions obtaining in many parts of the district.

There can be no doubt that the question of the prevention of consumption and other forms of tuberculosis is occupying a very prominent position in the mind of the public at the present time. This is evidenced locally by the formation of an association for its prevention and the energy with which this movement has been taken up. The movement however is not merely a local one, but is in operation to a greater or lesser extent throughout the whole country. It has found expression in legislation by the issue of the Tuberculosis Regulations, and by the introduction into Parliament of a bill designed more especially for the prevention of tuberculosis derived from animals; and there is at the present time in London an exhibition for the special purpose of educating the people on the question of the prevention of tuberculosis. The reason why all these measures are being taken for the prevention of tuberculosis at the present time is that the public have suddenly become alive to the fact that this dreadful disease which causes so much fatal illness and distress can be prevented, and in time can be eradicated.

It must clearly be understood that the formation of an Association for the Prevention of Consumption does not mean that the Sanitary Authorities will be relieved of any of their work. It means rather that the work of Sanitary Authorities in the prevention of consumption will be more urgently needed and will be much more fruitful. Apart from the sanatorium treatment of early cases of consumption the work of the Association will be to a great extent educational, but at the same time the Association will no doubt deal with all those matters which must necessarily fall to charitable and voluntary agencies. The work of these bodies will be supplementary and dovetail into one another, the results of the work of Sanitary Authorities being greatly increased by the work of the Association and *vice versa*.

It must be recognised from the outset that the movement as a whole will be a failure unless there is active co-operation by the Sanitary Authorities. *The first step that should be undertaken throughout the County is the establishment of a system of voluntary notification of consumption*, and this should be carried out in such a manner, that with the help of the Association it cannot fail to be a success. Voluntary notification has already been adopted in Shrewsbury, Ludlow, Bridgnorth, Wem and Wellington Urban Districts, and in Drayton, Atcham, Clun and Chirbury Rural Districts, but the reports in almost every instance show that it has either been a failure or only a very partial success. If however the Sanitary Authorities show themselves in earnest in the work of the prevention of consumption, and give evidence that they are prepared to do all in their power in the way of supervision and education of the patient, disinfection of the infected house where necessary, the supplying of means (spit bottles, etc.), for the disposal of sputum, and the improvement of the isolation of advanced cases; and if the Association provides or helps to provide open air treatment for suitable cases, either in an institution or at the homes of the patients, and generally does what is possible to alleviate the distress caused by consumption, then we may be certain that voluntary notification will become a great success.

The first important step is undoubtedly to present the matter in a proper light to the medical profession. In the circular letter to the medical practitioners of a district announcing the adoption of notification and asking for their co-operation, the action that will follow notification

and the benefit to the patients and the public at large should be clearly set out. The following extract from a Memorandum of the Medical Officer of the Local Government Board (Dr. News-holme) puts the matter so well as it affects the medical practitioner, that it might with advantage be sent to all practitioners in districts where notification is decided upon :—

“ When a diagnosis has been secured, the first and most essential point is for the doctor in attendance, whether he be the poor law medical officer or a private practitioner, to acquaint the patient with the nature of his illness. This is indispensable, if the active co-operation of the patient in regard to precautions is to be secured. It is equally necessary for the patient’s own welfare, which depends in large measure on his intelligent carrying out of instructions. As the vast majority of cases of pulmonary tuberculosis recover when recognised early, and as life in more advanced cases can be prolonged by efficient treatment, there need be no hesitation in following this course.

The doctor will also consider whether, even though the particular case is not compulsorily notifiable, he will not be acting in the interest of his patient, as well as of the public health, to notify his case to the medical officer of health, under a voluntary system of notification.

Next must follow the giving of instructions to each patient and the disinfection of bedrooms, &c., when the need for this is indicated. Although the medical attendant may be able to give the personal instructions, it is none the less true that, under the usual conditions of medical practice, and particularly among the poor, supplementary aid is required to prevent infection and to secure the best arrangements for the patient’s welfare.

It should be the aim of the medical officer of health to furnish this supplementary aid in a way that will secure the continued co-operation with him of the patient and of his medical attendant.”

It is unnecessary here to enter upon the advantages of notification, for it must be obvious that notification is the foundation upon which the whole work is based. Voluntary notification, although imperfect, is capable of rendering good results if properly worked, and it will prepare the way for more complete notification later on.

The measures that should be taken on receipt of notification may be summarised :—

(1) A preliminary visit should be made by a sanitary official at which—

(a) An investigation form should be carefully filled in. This form should give the history of illness of patient, personal history, family history, condition of house with regard to accommodation, structure, and cleanliness, details bearing upon origin of infection, condition under which work is carried on, etc. Much of this information is for the general advancement of knowledge which is absolutely necessary for the application of preventive measures with the greatest efficiency. It will, however, often throw light upon local problems and show influences favouring the spread of phthisis which otherwise would be unsuspected.

(b) The patient should be instructed as to how to live so as not to be a danger to the rest of the household and the rest of the community. Simple rules of living, which are important in the prevention of consumption, should be pointed out to the rest of the household. Printed instructions may with advantage be delivered to every house in the sanitary district.

(c) The health of the other occupants of the house should be inquired into carefully and in cases where there are any signs of incipient phthisis a strong recommendation should be made that medical advice should be obtained.

(2) Attempts should be made to improve the conditions, particularly the sleeping conditions, of the patient. Wherever possible a phthisical person should have a well-ventilated bedroom to himself. In early cases this is necessary for his own cure, and in later cases for the protection of the family against infection.

The improvement of isolation of advanced cases may only be possible in some instances by removal to Workhouse Infirmaries or to special hospitals.

(3) With the consent of the patient, the notification of consumption should be forwarded together with all the salient facts to the Local Committee of the Association, so that all practicable steps for the cure of the case or for alleviation of distress, or for the improvement of isolation at home may be taken.

(4) Arrangements should be made for the disinfection of the house or those parts in which the patient has lived. Broadly speaking, the walls, floors, and furniture should be washed with a disinfectant, all washable clothing should be steeped in the disinfectant, and all other clothing, carpets, curtains, bedding, etc., should be disinfected in a steam disinfecter. Chloride of lime (1½ oz. to one gallon of water) is a cheap disinfectant, and has been shown by Prof. Delèpine to be very effective.

(5) Periodic visits should be made in order to see that the instructions with regard to the disposal of sputum, cleanliness of the house, and other matters are carried out, and to discover removals. It should be the aim of the inspector to see that complete washing of the floors and skirtings is carried out every week, and cleansing of the walls with dough every three months.

(6) Disinfection of the house should be carried out after removal or death of the patient.

(7) Visits should be paid to the workshop where the patient is employed to see that there is no spitting on the floor and that the place is clean. Great care must in these cases be taken not to disclose the reason for the visit. Similar visits should be made to other places resorted to by the patient, e.g., public houses.

(8) Great attention should be paid to insanitary conditions of houses, etc., associated with phthisical cases.

The work of sanitary authorities with regard to the more advanced cases of phthisis is one of the utmost importance, and one which is likely to be lost sight of, unless insisted upon. It is these cases that give off such a large amount of infectious material and that constitute the real danger. During the early part of this more advanced and incurable stage the patient is in many cases able to go about his work much as usual, and he is able, *if properly instructed and trained*, to so dispose of his sputum and control infection given off by coughing that he is little or no danger. At a still later stage the problem is different. The following quotation from Koch vividly describes the state of things that now exists:—“The last three or four weeks of life are the most deadly in the spread of infection. The man dies at last, but the education in him dies before him; his every cough, sneeze, or effort of speech sends forth a spray laden with bacilli in virulent form, deadly to the poor wife and children around.”

The work of a sanitary authority should be devoted to improving the isolation so as to lessen the risk of infection to the rest of the household. Those persons who are in receipt of Poor Law medical relief might with advantage be removed to special wards in the Workhouse Infirmarys. For other persons there is the alternative of improving isolation at home, so as to provide a separate sleeping room, kept under conditions that will not favour the spread of infection and improving the methods adopted for preventing infection so as to give reasonable safety; or removal to a cottage or hospital provided specially for this purpose. So far no provision of this kind has been made in any part of the County, and it is worth considering whether the hospitals provided for small-pox might not be used for this purpose. They would be kept in greater readiness than they are at present, and in the event of an outbreak of small-pox they could be emptied at once.

The Local Government Board issued an Order in December, 1908, under the title of "The Public Health (Tuberculosis) Regulations, 1908," by which cases of pulmonary tuberculosis, attended by Poor Law Medical Officers, have to be notified to the Medical Officers of Health of the districts where the cases are. Cases of pulmonary tuberculosis in Workhouses have to be notified by the Medical Officers within 48 hours of recognition to the Medical Officers of Health of the districts, that the patients have come from, and when these patients are discharged from the Workhouses, the Masters have to notify the Medical Officers of Health of the districts to which they are going.

Changes of addresses of cases occurring in Poor Law practices have to be notified by the Relieving Officers. The fees payable for the notifications are one shilling to Medical Officers and threepence to other officers.

Nothing is to be done in pursuance of these regulations that will interfere in any way with a person's employment or means of livelihood ; but subject to this proviso a Council on the advice of their Medical Officer of Health may take measures, in any case notified under the regulations, for the disinfection of articles and premises, for the safe disposal of infectious material, and for the supply of facilities or articles for lessening the risk of infection.

A Council may distribute information in the shape of placards, handbills, or leaflets, with respect to pulmonary tuberculosis, and the precautions that should be taken to prevent its spread.

This order must be of considerable value in dealing with many dangerous cases of consumption, and taken along with the memorandum accompanying it which suggests that there should be little difficulty in securing the observance of the same precautions in other than poor-law cases, it is a very important advance in the prevention of consumption. It gains still greater significance from the fact that it is probably a forerunner of the adoption of compulsory notification of consumption in all cases.

The Association for the Prevention of Consumption was formed in the early part of this year, and has held many meetings in various parts of the County for the formation of local committees. The educational effect of these meetings and the educational effect of the work of these local committees must be far reaching.

It is not necessary to dilate upon the enormous advantage that a sanatorium will be to the County, but the following quotation from the memorandum of the Medical Officer of the Local Government Board previously referred to, dealing with the educational effect of a stay in a sanatorium will be useful in emphasizing one most important aspect of the utility of sanatoria which is apt to be overlooked :—

" In considering the cure of the patient by sanatorium treatment, what has already been said as to early diagnosis needs to be borne in mind. In actual experience a large proportion of poor patients cannot be cured at the stage at which their disease is first recognised, without treatment which is so protracted and so large in amount when attempted for a large number of patients, as to be outside the range of present practical administration. Many such patients, however, either recover, or without complete recovery continue to be able to work indefinitely, even when protracted sanatorium treatment cannot be secured. Their working life can be extended and their capacity to spread infection can be stopped by an occasional stay in a sanatorium, of limited duration, say, for a month. It is on sanatorium treatment of this type for patients still able to work that stress may be laid. The patient usually does not lose his place by the short absence from work contemplated ; he is willing to come into a sanatorium for such a short stay, when he would not accept more protracted treatment ; and the improvement experienced during such a short stay in a sanatorium is often most remarkable. This, however, is not the only gain. When the patient enters the sanatorium his dwelling is disinfected ; his relatives are relieved

temporarily from a source of anxiety ; and the patient while in the sanatorium is trained in the methods of disposal of sputum, and in the general hygienic regulation of his life in a practical manner that is scarcely possible at home. On his return home he is therefore no longer likely to be a source of infection, and the general hygiene of his home is almost certain to reflect the good influence of his stay in the sanatorium. From the standpoint of the sanitary authority a much larger number of patients can, in this way be treated and prevented from becoming a source of infection, than if permanent cure of the individual patient were made the only consideration."

The question of early diagnosis lies at the root of the cure of consumption. The County Council helps materially in this matter by the provision of facilities for the examination of sputum, and these facilities might be used to a greater extent with advantage. The medical inspection of school children is bringing to light cases in the earliest stage, many of which would otherwise have been overlooked until too advanced for cure. The notification of consumption will give opportunity for discovering incipient secondary cases in the same household. The provision of a sanatorium will, by making the treatment of phthisis more hopeful, undoubtedly remove some of the obstacles that at present exist to an early and definite diagnosis of the disease. The educational work of the Association will spread a knowledge of the importance of early diagnosis and of the early symptoms of phthisis. All these influences will lead to the more early recognition of the disease, and it remains to be seen whether there is scope in any part of the County for the work of a tuberculosis dispensary.

The prevention of indiscriminate spitting should undoubtedly be one of the main objects to be kept in view in preventing consumption. Of late years there has been a marked improvement in this respect, and part of this improvement may well be due to the advertisement of the County Council bye-law prohibiting spitting in public places, and the posting of notices in public houses, workshops, and factories.

The prevention of consumption is by no means complete unless the spread of this disease from animals to man is prevented. Fortunately the extermination of the disease amongst animals is a comparatively simple matter, although one that may involve great expense. Some remarks on this subject are made on pages 47 and 48 under the heading of Milk Supply and Dairies and Cowsheds Inspection.

CANCER.

Cancer caused 263 deaths during the year compared with 258 in 1907 and 242 in 1906. One hundred and forty-three of the deaths were in the rural districts and 120 in the urban districts.

Table 13.

DEATH-RATES FROM CANCER IN THE URBAN AND RURAL DISTRICTS FOR THE YEARS 1900—1908.

URBAN DISTRICTS.										Average for years 1900—1908
	1900	1901	1902	1903	1904	1905	1906	1907	1908	
Bishop's Castle ..	.6	.0	2.2	2.2	.0	.76	.00	2.31	1.55	1.07
Bridgnorth ..	.6	1.32	1.1	.72	1.1	1.4	1.81	1.48	.99	1.21
Church Stretton ..	.0	.0	.0	.96	.0	2.2	.00	2.27	.00	.67
Dawley ..	.4	.79	1.3	1.0	1.0	.78	1.17	1.17	.91	.96
Ellesmere ..	.5	2.05	1.5	3.0	.0	1.0	.50	.00	1.99	1.18
Ludlow ..	1.5	.44	1.2	.31	1.7	1.2	1.67	1.67	.91	1.14
Newport ..	2.64	.92	.95	.63	1.9	1.6	.64	1.93	.32	1.28
Oakengates ..	.5	1.10	.64	1.2	1.1	.72	.81	1.26	1.08	.95
Oswestry ..	.5	.62	1.4	1.0	.6	.70	1.21	.50	1.31	.87
Shrewsbury ..	.8	.73	1.07	.89	1.0	1.3	1.05	.94	.97	.99
Wellington ..	.7	1.25	1.1	1.4	1.2	1.3	.79	.92	1.19	1.07
Wem ..	.0	1.85	2.3	.9	2.2	.0	.89	.88	1.32	1.16
Wenlock ..	.9	.94	1.07	.94	1.0	1.3	.75	.94	1.26	1.01
Whitchurch ..	1.6	.57	.57	1.3	1.3	.38	2.06	.56	1.49	1.09
All Urban Districts ..	.8	.88	1.1	1.0	1.1	1.1	1.07	1.05	1.09	1.02
RURAL DISTRICTS.										Average for years 1900—1908
	1900	1901	1902	1903	1904	1905	1906	1907	1908	
Atcham ..	1.1	1.19	1.1	.95	1.06	1.4	.91	.96	1.36	1.08
Bridgnorth ..	.6	.81	.93	1.1	.46	.46	.93	1.51	.93	.88
Burford ..	.0	.81	.82	1.6	1.6	1.6	.00	1.62	2.43	1.19
Chirbury ..	1.2	1.69	.85	.84	1.1	.84	.84	.56	1.13	1.04
Church Stretton ..	.8	1.11	1.54	1.3	.22	1.3	.67	1.12	1.13	1.05
Cleobury Mortimer ..	.6	.74	1.2	.94	.15	.62	.46	.61	.92	.71
Clun ..	1.5	1.31	.73	.74	1.8	.59	1.35	.90	.60	1.07
Drayton ..	.7	.94	1.3	1.0	1.3	.34	.77	1.99	1.21	1.07
Ellesmere ..	.7	.88	.5	1.2	.63	.63	1.39	.76	.88	.86
Ludlow ..	.9	.78	.52	.84	1.0	.94	.52	1.22	.61	.86
Newport ..	1.6	1.14	.83	1.3	.98	.99	.99	.83	1.49	1.16
Oswestry ..	.7	1.21	.74	1.2	1.5	1.1	1.54	.67	1.53	1.14
Shifnal ..	.6	.34	1.2	.67	.68	1.1	1.13	.91	.69	.83
Teme ..	.5	1.08	.0	.0	1.08	3.2	1.08	2.17	1.08	1.14
Welling on ..	.6	1.01	.6	.52	1.1	1.3	.60	1.05	.97	.88
Wem ..	.7	.72	1.08	.48	.60	.60	.84	1.09	.97	.79
Whitchurch ..	.0	1.55	.0	1.55	.0	1.5	.52	1.57	.00	.76
All Rural Districts ..	.8	.99	.87	.94	.96	.98	.94	1.07	1.07	.97

This table shows that the highest rates for 1908 were Burford 2.43, Ellesmere Urban 1.99, Bishop's Castle 1.55, Oswestry Rural 1.53. These, however, are mostly small districts, and their rates for one year are of little importance.

Taking the average for nine years the highest rates are Newport Urban 1.28, Bridgnorth 1.21, and Burford 1.19.

The rate for the nine years in the urban districts is higher than in the rural, notwithstanding that the age distribution of the population would favour a higher cancer death-rate in the latter.

As pointed out in previous reports the crude death-rates from cancer in the different districts depend so much upon the age distribution of the population, that it would be far preferable to calculate the rates upon the population over 45 years of age. If this were done throughout the country, cancer rates of some value for comparison would be obtained. This method applied to the sanitary districts of Shropshire for the period 1900-1908 gives the following results:—

Table 14.
1900-1908.

CANCER DEATH-RATES CALCULATED UPON THE POPULATION OVER 45 YEARS OF AGE.

URBAN DISTRICTS,

RURAL DISTRICTS.

Bishop's Castle	3.6	Oakengates	.. 4.7	Atcham	.. 3.9	Ludlow	.. 3.5
Bridgnorth	.. 5.3	Oswestry	.. 4.2	Bridgnorth	.. 3.6	Newport	.. 4.8
Church Stretton	2.8	Shrewsbury	.. 4.8	Burford	.. 4.5	Oswestry	.. 4.6
Dawley	.. 4.5	Wellington	.. 5.4	Chirbury	.. 4.0	Shifnal	.. 3.7
Ellesmere	.. 5.0	Wem	.. 5.1	Church Stretton	3.6	Teme	.. 4.6
Ludlow	.. 5.3	Wenlock	.. 4.2	Cleobury Mortimer	3.0	Wellington	.. 3.8
Newport	.. 5.2	Whitchurch	.. 5.1	Clun	.. 4.2	Wem	.. 3.2
				Drayton	.. 4.2	Whitchurch	.. 3.2
				Ellesmere	.. 3.7		

Combined Urban Districts .. 4.7

Combined Rural Districts 4.0

Calculated in this manner the urban rate is nearly 20% higher than the rural rate.

As the following figures show the crude death-rates from cancer since 1894 for this county have been much in excess of those of the country generally.

Table 15.
DEATH-RATES FROM CANCER.

YEAR.	REGISTRATION COUNTY OF SHROPSHIRE.	ENGLAND AND WALES.
1894	.705	.713
1895	.989	.755
1896	.923	.764
1897	1.060	.787
1898	1.028	.802
1899	.976	.829
1900	.931	.828
1901	.965	.842
1902	1.059	.844
1903	1.033	.872
1904	1.024	.879
1905	1.044	.885
1906	1.019	.917
1907	1.013	.909
Average of 14 years 1894-1907	.983	.830

The following table giving the cancer rates in age periods for 1891-1900 shows exactly the same features as that given in my previous reports for the period 1881-1890. The Shropshire cancer rate is lower than that of England and Wales at every age except 65 and upwards

Table 16.

CANCER IN AGE PERIODS 1891-1900.

AGE PERIODS.	Deaths from Cancer in age periods expressed as a percentage of total deaths from Cancer.		Death-rates from Cancer per 1000	
	Shropshire (Registration County).	England and Wales.	Shropshire (Registration County).	England and Wales.
35-45	6%	10%	.5	.6
45-55	16%	21%	1.6	1.8
55-65	27%	28%	3.4	3.6
65 and upwards	47%	35%	5.9	5.7

It is quite possible that the death-rates for the County are somewhat understated, on account of deaths that have taken place in hospitals outside the county, and not been included in the county figures.

There is no material at my disposal for comparing the death-rates in the sexes or with respect to the organs affected.

ACCIDENTS AND DISEASES OF PARTURITION.

There were 23 deaths in the County from these causes, not including puerperal fever, 17 in the rural and 6 in the urban districts. The numbers for previous years were 15 in 1907, 14 in 1906, 25 in 1905, 16 in 1904, 15 in 1903, 21 in 1902, and 25 in 1901.

These deaths are of special interest in connection with the administration of the Midwives Act. It would be a great aid to the efficient administration of the Act if all deaths of women within a certain period of child-birth were reported to the County Council by the Registrars of Births and Deaths.

BACTERIOLOGICAL DIAGNOSIS OF DISEASE.

Quarters of 1908.	For Typhoid Fever. Widal's Reaction.		For Diphtheria.		For Phthisis.	
	Positive.	Negative.	Positive.	Negative.	Positive.	Negative.
First	3	7	57	89	10	25
Second	1	4	48	79	10	22
Third	0	8	26	45	8	18
Fourth	1	2	51	76	12	18
Whole Year	5	21	182	289	40	83
	26		471		123	

The total number of specimens sent was 620, compared with 497 in 1907, 393 in 1906, and 299 in 1905.

Although the number of specimens examined has very greatly increased, particularly with respect to diphtheria, it is only in a comparatively small percentage, that cases of diphtheria are re-examined until they are found to be free from infection. In 1908, out of 151 cases showing diphtheria bacilli, only 58 were re-examined until reported as free.

Bacteriological examination is the only means of determining freedom from infection in diphtheria, and it is very desirable that every case should be re-examined until a negative result is obtained.

With this object in view the following letter has been sent to all the medical practitioners in the County :—

SIR,

BACTERIOLOGICAL EXAMINATIONS.

The Salop County Council has recently had under consideration the arrangements made by them with the Birmingham University for Bacteriological Examinations, and regret the limited extent to which Medical Practitioners avail themselves of those facilities, particularly with regard to diphtheria.

The attention of the County Council has been specially called to the fact that it is comparatively rare, in the case of diphtheria, for a second specimen to be submitted for examination in order to ascertain whether or not the person is free from infection.

It would be a great help to those engaged in the prevention of this disease, if every case were submitted for examination as an aid to diagnosis, and if further specimens were sent until declared free from diphtheria bacilli.

I am accordingly to urge upon you the desirability of utilising the facilities to a greater extent for both these purposes.

I am, Sir,

Your obedient Servant,

E. C. PEELE,

Clerk of the County Council.

SCHOOLS AND SCHOOL CLOSURE.

The closing of schools can now only take place either by order of the Sanitary Authority or two members of the Sanitary Authority acting on the advice of the district Medical Officer of Health, or by the School Medical Officer. Closure on "Medical Authority" previously allowed by the Code is no longer permitted. The result will be that in the majority of instances the decision as regards closure will devolve upon the School Medical Officer.

A memorandum dealing with this matter and with the exclusion of children on account of infectious disease is being issued to the schools.

The number of schools closed in 1908 on account of the various diseases is as follows :— Measles, 71, whooping cough 21, scarlet fever 13, mumps 10, chicken-pox 8, diphtheria 5, and influenza 4.

The medical inspection of school children is dealt with in a separate report to the Education Committee.

VACCINATION.

I have been able to compile the vaccination statistics through the courtesy of the vaccination officers, who have kindly supplied me with all particulars.

A slight falling off in the efficiency with which vaccination in the County was carried out, as shown by the vaccination figures, was noticed as early as 1905. This became more pronounced in 1906, and the figures contained in the present report dealing with the year 1907 and the first half of 1908 show a very rapid decrease in the percentage of children vaccinated. In fact if the somewhat incomplete figures referring to the first six months of 1908 be taken as an index of the present state of vaccination, it is now worse than it was in the very unsatisfactory period of 1893—1897.

The falling off is accounted for to a very great extent by the increase in the number of certificates of conscientious objection granted, and this increase is no doubt due almost entirely to the ease with which the certificates may now be obtained.

Conscientious objection certificates granted in each year expressed as a percentage of the births in that year :—

						First 6 months of 1908.
1903	1904	1905	1906	1907		
1.3	1.7	1.7	2.4	5.5		
						12.5

Table VI., particularly that part dealing with the first six months of 1908, shows that in many districts a very considerable proportion of the children are not being vaccinated. If this continues we shall have in a few years a large population susceptible to small-pox, and it will only need the introduction of infection to produce a serious epidemic. I have in previous reports expressed my opinion that the measures taken to prevent epidemics in this County in the years 1902, 1903, and 1904, would have been totally inadequate if a large proportion of the population had not been protected by vaccination.

The districts of Clun, Drayton, Ellesmere, Ludlow, and Madeley are sub-divided and each division is worked by a separate vaccination officer. The percentage of unvaccinated children varies considerably in each sub-district.

Percentage of un-vaccinated children in the vaccination sub-districts for the year 1907 :—

CLUN.

Bishop's Castle	..	..	10.4
Clun	..	..	9.9
Lydbury	..	..	12.8
Norbury	..	..	5.4

LUDLOW.

Diddlebury	..	..	14.1
Clee Hill	..	..	1.4
Ludlow	..	..	15.3
Munslow	..	..	17.0

DRAYTON.

Drayton	..	..	4.4
Moreton Say	..	..	4.2

MADELEY.

Broseley	..	..	6.4
Dawley	..	..	1.4
Madeley	..	..	9.0

ELLESMORE.

Baschurch	..	..	3.9
Ellesmere	..	..	5.3

TABLE VI.
SHEWING VACCINATION OF INFANTS BORN IN 1907 AND FIRST HALF OF 1908.

VACCINATION DISTRICTS.	Births.	Successfully Vaccinated.	Insusceptible of Vaccination	Certificates of Conscientious Objection.	Died Unvaccinated	Vaccination Postponed.	Removed out of District.	Unaccounted for.	NUMBERS EXPRESSED AS PERCENTAGES OF BIRTHS REGISTERED.		
									Successfully Vaccinated.	Exempted by "Conscientious Objection" Certificates.	Unvaccinated including (1) Conscientious Objectors. (2) Postponed. (3) Unaccounted for.
1907.											
ATCHAM	1177	976	0	46	99	15	34	7	82.9	3.9	5.8
BRIDGNORTH	321	258	1	11	29	5	16	1	80.4	3.4	5.3
CHURCH STRETTON	141	126	0	3	9	0	3	0	89.4	2.1	2.1
CLEOBURY MORTIMER	258	212	0	28	13	4	0	1	82.2	10.9	12.8
CLUN	205	171	0	15	13	5	1	0	83.4	7.3	9.7
DRAYTON (Shropshire part)	298	257	0	10	24	3	4	0	86.2	3.4	4.4
ELLESMORE	226	201	0	9	11	2	3	0	88.9	3.9	4.9
LUDLOW	346	279	0	37	14	6	10	0	80.6	10.7	12.4
MADELEY	595	510	0	24	40	9	12	0	85.7	4.0	5.5
NEWPORT	222	178	0	12	24	1	7	0	80.2	5.4	5.9
OSWESTRY	660	544	0	31	48	18	13	6	82.4	4.7	8.3
SHIFNAL	257	209	0	10	20	4	14	0	81.3	3.9	5.4
WELLINGTON	763	629	0	48	41	5	27	13	82.4	6.3	8.6
WEM	239	191	1	28	17	1	1	0	79.9	11.7	12.1
WHITCHURCH	194	155	0	12	15	6	6	0	79.9	6.2	9.3
PARISHES OF CHIRBURY AND WORTHEN IN THE FORDEN UNION	No Return.										
TOTAL	5902	4896	2	324	417	84	151	28	83.0	5.5	7.4
First Six Months of 1908.											
ATCHAM	576	458	1	38	47	9	17	6	79.5	6.6	9.2
BRIDGNORTH	152	95	0	29	14	0	4	10	62.5	19.1	25.7
CHURCH STRETTON	52	43	0	2	5	1	1	0	82.7	3.8	5.8
CLEOBURY MORTIMER	123	94	0	16	8	3	0	2	76.4	13.0	17.1
CLUN	101	74	0	16	6	4	0	1	73.3	15.8	20.8
DRAYTON (Shropshire part)	166	137	0	17	10	1	1	0	82.5	10.2	10.8
ELLESMORE	107	86	0	8	8	3	2	0	80.4	7.5	10.3
LUDLOW	184	107	0	49	21	6	1	0	58.1	26.6	29.9
MADELEY	317	234	0	42	26	8	7	0	73.8	13.2	15.8
NEWPORT	119	91	0	8	11	3	6	0	76.5	6.7	9.2
OSWESTRY	393	277	0	53	27	25	6	5	70.5	13.5	21.1
SHIFNAL	143	100	0	12	14	6	11	0	69.9	8.4	12.6
WELLINGTON	356	262	0	61	16	1	13	3	73.6	17.1	18.3
WEM	127	100	1	13	9	3	1	0	78.7	10.2	12.6
WHITCHURCH	95	71	0	14	5	4	1	0	74.7	14.7	15.8
PARISHES OF CHIRBURY AND WORTHEN IN THE FORDEN UNION	No Return.										
TOTAL	3011	2229	2	378	227	77	71	27	74.0	12.5	16.0

Table 17.

PERCENTAGE OF UNVACCINATED CHILDREN IN THE YEARS 1893—1907.

UNIONS.	1893-1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907
Atcham ..	.. 11.9	9.4	6.7	4.4	3.7	4.0	1.9	2.9	2.7	3.9	5.8
Bridgnorth ..	.. 7.1	8.3	8.6	5.3	6.5	4.2	2.9	2.7	1.7	4.7	5.3
Church Stretton ..	.. 2.4	3.2	.9	2.8	2.5	1.7	1.4	1.6	.8	3.8	2.1
Cleobury Mortimer ..	.. 4.8	5.4	6.4	4.6	6.3	5.5	1.7	4.0	4.6	6.9	12.8
Clun ..	.. 34.2	18.8	12.4	11.2	9.0	9.5	4.4	6.8	9.5	4.7	9.7
Drayton ..	.. 1.7	3.6	4.2	4.8	2.8	2.2	.3	1.7	1.8	1.3	4.4
Ellesmere ..	.. 2.9	1.6	3.0	2.9	3.2	1.1	1.9	1.1	1.7	2.7	4.9
Ludlow ..	.. 7.5	9.9	6.7	7.0	5.7	4.6	3.8	5.5	5.6	6.0	12.4
Madeley ..	.. 5.2	8.2	6.2	2.3	3.2	2.3	3.4	3.3	3.5	3.8	5.5
Newport ..	.. 5.3	9.6	5.9	5.6	5.4	3.5	2.6	3.9	.9	4.8	5.9
Oswestry ..	.. 3.9	5.8	3.1	4.1	2.7	2.2	2.1	2.2	5.2	7.6	8.3
Shifnal ..	.. 15.7	8.5	7.8	2.0	1.8	1.5	2.8	3.0	2.2	3.0	5.4
Wellington ..	.. 39.7	33.9	23.8	9.6	6.1	7.0	4.9	4.2	3.8	5.2	8.6
Wem ..	.. 1.6	7.5	7.9	6.3	5.2	5.1	3.9	5.0	12.9	13.3	12.1
Whitchurch ..	.. 5.1	13.4	16.7	9.5	5.6	7.4	6.5	5.8	9.6	5.5	9.3
Total ..	.. 11.0	10.8	8.3	5.4	4.4	4.0	3.0	3.4	3.9	5.0	7.4

DISINFECTION.

In considering the disinfection of a house and its contents after infectious disease, there are three essentials, and if any of these are neglected the sanitary authority concerned is not enforcing satisfactory disinfection.

(1) The disinfection must be carried out by or under the direct supervision of a sanitary official.

(2) A liquid disinfectant of sufficient strength must be brought into contact with all surfaces exposed to infection, except articles disinfected by steam.

(3) All bedding and textile fabrics must be disinfected by steam.

If these conditions be applied it will be found that in the majority of the districts the disinfection is not satisfactory.

The sanitary authorities in the county with steam disinfectors are Bridgnorth, Wellington Urban and Rural, Drayton, Atcham, Wem Urban and Rural, Shrewsbury, Bishop's Castle and Clun.

The provision of a disinfecter is under consideration for Dawley, Oakengates, and Whitchurch Urban and Rural.

HOSPITAL ACCOMMODATION.

The following is a statement of the position of the County with regard to hospital accommodation :—

For Small-pox.

1.—A hospital for 6 beds ..	.. for Shrewsbury and a Berthon Hut to be used in an emergency.
2.—A hospital for about 8 beds ..	.. for Cleobury Mortimer, Burford and Tenbury, and Rock in Worcestershire.
3.—A hospital for about 6 beds ..	.. for Ludlow Urban and Rural Districts.
4.—A hospital for 6 beds ..	.. for Chirbury and the other districts in the Forden Union.
5.—A hospital for 8 beds ..	.. for the Districts of Whitchurch Urban and Rural, Wem Urban and Rural, and Drayton Rural.
6.—A hospital for 8 beds ..	.. for Shifnal and Dawley.
7.—A hospital for 8 beds ..	.. for Wellington Urban and Rural Districts.
8.—A hospital for 8 beds ..	.. for the Borough of Wenlock, at Broseley.
9.—An isolated cottage ..	.. for Bishop's Castle and Clun.
10.—An isolated cottage ..	.. for Teme and Knighton Urban and Rural Districts.
11.—A Berthon Hut and Small Tent ..	for Atcham Rural District.

Also the following sites have been secured for putting up buildings or tents in case of emergency :—

- 1.—One to serve Oswestry Borough.
- 2.— " " Oswestry Rural District.
- 3.— " " Newport Urban and Rural Districts.

The Borough of Bridgnorth makes use of its infectious diseases hospital for small-pox cases when necessary.

Oakengates, Ellesmere (Urban and Rural), and Bridgnorth (Rural), are quite without any hospital accommodation, or any site on which a hospital might be erected in case of emergency.

For other Infectious Diseases.—The accommodation in the County consists of (1) a small hospital at Bridgnorth, also used for small-pox ; (2) a hospital of 4 beds for the Newport Urban District ; (3) a hospital of 8 beds at Market Drayton for the Drayton and Blore Heath Rural Districts.

Some of the reports contain recommendations with regard to hospital accommodation. The most important of these are given in the following quotations :—

Atcham. “ In the majority of cases of ordinary infectious disease in the district, reasonably good treatment and measures can be secured at the patient's home, but there can be no doubt as to the desirability of the District having some permanent, and readily available, isolation accommodation, for the serious and acute outbreaks which from time to time will arise, and cause difficulty in treatment and prevention, which can be promptly obviated only by the existence of proper public accommodation.”

Church Stretton Urban. “ As described in my last year's report the Council has under offer and consideration a site for a hospital which appears to me very suitable. The question of water supply has delayed progress during the year. Trial sinkings were made by the Council upon the site, but failed to find sufficient water. The suggestion now, and it appears to me to be the best, is to lay on the Water Company's water to as near a point to the site as it will rise to, and to provide a small pumping plant at that point to lift the water the remaining distance.”

Church Stretton Rural. “There is no isolation hospital for the use of the District. In the probable event of the Urban District Council providing itself with a hospital I would suggest the desirability of coming to an arrangement of terms by which cases from the Rural District might be treated there when special circumstances render hospital treatment desirable.”

Ludlow Urban. “Either the Borough alone or the Borough and District should provide such an institution, and I trust the matter will receive your serious consideration at an early date.”

“In this district an initial provision of 2 beds per 1,000 would not be too much, as the demand for the benefits of the institution rapidly increases when once the public appreciate its benefit.”

Newport Urban. “I have strongly recommended a permanent increase of the ward space in readiness for future emergencies, and would now repeat this advice.”

Shrewsbury.—“Various attempts were made to find a suitable site, within reasonable distance of the town, but without success, and it was finally decided to fall back on a suggestion which had been put before the Committee in a report on the general need for an Isolation Hospital by Dr. Reynolds, namely, to convert Monkmoor Hall to the purpose, making the house itself into an administrative block, and erecting ward pavilions in the garden.”

Teme. “The Isolation Hospital accommodation is not at all satisfactory, the hospital consists of two small cottages, and only one disease can be treated at the same time.”

HOUSE ACCOMMODATION.

There is much evidence in the reports that in many of the rural districts there are old and dilapidated houses which cannot be closed on account of lack of other accommodation. The following quotations from the reports of the Atcham and Cleobury Mortimer Districts will illustrate this point:—

Atcham Rural District. “During the year I presented certificates under Sec. 30 of the Housing of the Working Classes Act, 1890, declaring five houses in Cressage village to be unfit for habitation on account of their dilapidation, due to age and neglect, and defective ventilation. I recommended proceedings for direct closure, leaving it to the owner to carry out such repair or reconstruction as might lead subsequently to the removal of the order for closure. The Council however considered that the scarcity, or absence, of alternative accommodation for the occupants made it undesirable to close the houses, and the owner carried out some repairs and patched up the worst features of dilapidation.”

Cleobury Mortimer Rural District. “There is distinct need for more cottages on the Clee Hill, the recent epidemic there brought to my notice several bad cases of overcrowding. In addition at least a dozen cottages on the hill require to be closed, or considerable repairs will be necessary to make them habitable. Several of these are structurally dangerous, they have to be propped by the occupiers to keep them up, others are not rain proof, and they are all without proper drainage and water supply.”

Under these circumstances effective action by the Medical Officer of Health is extremely difficult, but notwithstanding the difficulties in the way of effecting reform and the fact that closing houses may temporarily at least aggravate the bad conditions of housing, it is his duty under the Housing of the Working Classes Act, 1890, to make a representation to his Council with regard to any house that in his opinion is unfit for habitation. The responsibility is then thrown upon the Sanitary Authority. Where housing accommodation is unsatisfactory, and where private enterprise is not sufficient to provide an adequate supply of new houses, there are only two courses open (1) for the Sanitary Authority to build houses under Part III. of the Housing of the Working

Classes Act, 1890, (2) for the Sanitary Authority to cause the existing houses to be maintained in the highest possible state of efficiency. This can only be done by a frequent and thorough house to house inspection, followed up by action wherever necessary. The enormous importance of this inspection as a conservative agency has not been sufficiently realised, and also the fact that without it rate aid for the building of houses will become much more urgent.

The necessity for a house to house inspection is pointed out in many of the reports, and in some of them it is stated that such an inspection is being carried out. Reference to Table VII. shows that in many of the districts this inspection is totally inadequate.

Dr. Gepp, in an introduction to his report on the Atcham Combined District, points out strongly the importance of a house to house inspection, and the necessity for proper records. Books for this purpose recommended in the previous report have been adopted in many districts. Dr. Gepp suggests that a systematic house to house inspection should be completed in three years at the most. It would be well if Sanitary Authorities would recognise that their districts are not being properly attended to, unless at least one-third of the houses are inspected each year, and the inspections recorded and acted upon.

In the towns, the problems are somewhat different, although here the need for frequent systematic house to house inspection is even greater. The action that should follow on such inspection should be directed to (1) maintaining the houses in a habitable condition by action under the Public Health Acts, (2) closing the houses unfit for habitation, (3) demolition of houses that have been closed if found dangerous or injurious to the health of the inhabitants of neighbouring houses.

This work is greatly facilitated, in cases where houses are scarce, if the Sanitary Authorities themselves provide houses for those displaced, but in towns the usual effect of closure of insanitary houses is to create a greater demand and more spontaneous building.

The Medical Officer of Health for Shrewsbury says "The strongest argument for the need of drastic reform in the housing conditions of Shrewsbury has already been pointed out in dealing with the general, infantile, and phthisis death-rates."

" . . . but both in Locality 1, and Locality 11, the high death-rate, which is equally well marked in the average of the past eight years, is undoubtedly due to the crowded and insanitary condition of the houses. This is conclusively shown in the Infantile Mortality Rate, which is calculated on observed facts, and is independent of the age distribution of the people."

" . . . but there is not likely to be any great reduction (of the infantile mortality) until the housing conditions in Frankwell and the adjoining part of the old town are improved."

These are very serious and definite assertions of impairment of the health of the inhabitants from defective housing conditions, and they point out what is perhaps, from the point of view of the welfare of the inhabitants, the most important duty of the Borough Council.

The following quotations from the Annual Reports give an idea of the conditions met with throughout the County, and of the work that is being done :—

Atcham. "As in most Rural Districts, there is a large number of very old houses becoming worn out and needing frequent inspection and attention to keep them above the border line of unfitness."

Bishop's Castle. "The town being very old, there are a good many cottages of old and poor construction, which need repeated inspection and attention."

Chirbury Rural. "Many houses have been attended to on account of damp, and been improved as far as the construction of such houses permit of improvement. The house to house inspection is nearing completion, and has been an excellent piece of work. No case of serious over-crowding has been brought to my notice."

Drayton Rural. “This is ample and satisfactory for the district. In Market Drayton and Little Drayton conditions have improved in recent years, as many old and dilapidated houses have been closed, and an increasing number of houses have been built for the accommodation of the working classes.”

Ludlow Rural. “There are a good few cottages in the outlying parts of the district that require to be thoroughly repaired or closed, and I think it would be well if a systematic inspection of this class of property were undertaken by the new Sanitary Inspector.”

Wellington Urban. “The cheap small cottages which are so much required in the town seldom receive any addition. This is a department of building which the Council ought to take up if there is to be any great improvement in the slum property in the town. There still exists a large number of houses which either impede the development of the children, or actually breed disease; where sunshine, light, and fresh air have difficulty in carrying out their beneficial work.”

Other references to housing accommodation will be found under the heading of the various districts in Part II. of the report.

WATER SUPPLIES.

The improvement of the water supplies has made some considerable progress during the year, but there are many schemes mentioned in last year's report that are still under consideration.

Schemes that have been initiated, partly carried out, or completed during the year.

The Upper part of Wellington Rural Parish, including Dawley Bank is being supplied from the Dawley Urban Water Supply.

Dawley. The scheme for supplying Dawley from the Harrington Well is practically complete.

Donnington Wood. Considerable progress has been made in carrying out the scheme of supply from the Lilleshall Well.

Oakengates. The supply from Hilton Bank Well is now complete.

Nantmawr has been supplied with excellent water.

Montford. A scheme of supply has been completed.

Bayston Hill. Further progress has been made with the scheme of supply.

Little Stretton. The Church Stretton water has been laid on.

Ash. A scheme for supplying the village has been carried out.

Whitchurch Urban District. Preliminary work for increasing the supply has been carried out.

Cheswardine.—A public supply has been provided.

The following schemes of supply or important improvements have been decided on.

Bridgnorth.—Filtration of the river water by Candy's filters has been decided on and will be carried out during the present year.

Shrewsbury. A scheme has been adopted for clarifying the river water by means of pressure filters. “The removal of dirt from the river water will be a very great boon to the town, and will result in a large saving of money now spent in renewing fittings and boilers which have been rendered useless by it. It seems highly probable that the knowledge that the water has been filtered will induce many people to make use of it for culinary purposes for many of which it is preferable to the much harder, if purer, conduit water.

The Water Committee have thus taken on themselves a certain responsibility, and though the type of filter chosen is undoubtedly very effective, it ought to be looked upon as an essential part of the process that the filtrate should be frequently examined bacteriologically, or the water should be treated with some bitter or similar chemical so as to discourage its use for dietetic purposes."

Wellington. Plans are before the Local Government Board for providing sand filters, etc. The gathering ground is to be further protected against pollution. "As the supply now stands it cannot be regarded as a safe one, and the new works are essential."

Barker's Green and Aston are to be supplied from the Wem Urban Council's mains. *Picklecott.* A scheme has been adopted.

Prees and Whixall. Schemes will shortly be carried out.

Schemes for new water supplies and improvements of water supplies are under consideration for Cross Houses, Dudley Heath, Chirbury R.D. (several villages), Clunbury, Clunton, Clun-gunford, Brockton (Clun R.D.), and Bucknell.

Bishop's Castle. Owing to leakage from the reservoir a report has been obtained from engineers, but no action taken.

Much Wenlock. An engineer has been called in to report and advise on account of shortness.

The following recommendations have been made :—

Ford—that a scheme should be prepared for supplying the village.

Church Stretton Urban—that the Town Brook valley water should be filtered.

All Stretton—that the Church Stretton Urban water be laid on.

Marsh Brook—that an existing well be made available by connecting it to a pump on the roadside.

Hungerford—an extension of a spring supply.

Bushmoor—the piping of a spring to the roadside.

Oswestry Urban—the filtration of the water supply.

Wellington Rural Parish—a scheme for obtaining water for the lower part of this parish from the Oakengates Urban supply.

Tilstock—relying of drawpipe on account of faulty coating.

Reports of deficiency of water supplies.

Drayton Rural District. After mentioning that the Market Drayton supply has been extended to Betton, and that Cheswardine has a public supply, Dr. MacQueen says "but in the other villages of the district the water supply, being mostly derived from pump-wells, often faulty in construction and in bad situations, offers much room for improvement in quality, and sometimes in quantity."

Ludlow Rural District. "At Aston Munslow there has been no improvement. There is plenty of water, but it is all subject to gross pollution."

Teme Rural District. "The water of Kinsley remains in the same unsatisfactory condition."

Oswestry Rural District. Porthywaen is very badly off for water.

On the whole it may be considered that fairly satisfactory progress is being made with regard to the supplies to the towns and large villages. There is little evidence however that much is being done with regard to the improvement of supplies to individual houses or small groups of houses. A considerable proportion of these supplies are very grossly polluted and many can only be described as imperfectly filtered sewage. The only method of dealing with these supplies is to carry out a careful and systematic house to house inspection, and to insist upon the removal of sources of pollution and the proper construction of wells. In those cases where houses with defective supplies are more or less grouped together the most practicable plan will often be for the District Council to provide a public well and pumps properly placed and to rate the users.

The following paragraph taken from previous reports deals with the improvement of the supply of individual houses, and the duties of District Councils under the Public Health (Water) Act :—

“ No action appears to have been taken by any of the Councils on the lines suggested by Dr. Gepp for improving well supplies. If, as he suggests, the majority of wells can be made reasonably safe by the expenditure of the amount specified in the Public Health (Water) Act, 1878, it undoubtedly is the duty of the Rural District Council to take action in these cases on its coming to their knowledge that the wells are polluted. It cannot be too much insisted upon that, to quote from sec. 3 of that Act, “ It shall be the duty of every Rural Sanitary Authority, regard being had to the provisions in this Act contained, to see that every occupied dwelling-house within their district has within a reasonable distance an available supply of wholesome water, sufficient for the consumption and use for domestic purposes of the inmates of the house.” If the authority cannot compel the owner to provide a supply it is their duty to provide it. Nor can this responsibility be moved on to the Parish Council concerned. For the Parish Council merely to reject a scheme on account of cost is not sufficient, they should at least bring forward some alternative suggestion, as the Rural District Council strictly have no option but to provide a supply or see that a supply is provided if the houses have not “ within a reasonable distance an available supply of wholesome water.” Instances are quite numerous in which the Rural District Councils have drawn up schemes either for water supply or sewerage and sewage disposal, and submitted them to the Parish Councils, who have rejected them on account of cost. The matters have then been allowed to drop. The Parish Council has a right under sec. 16 (3) of the Local Government Act, 1894, to receive notice when plans of sewerage or water supply have been adopted by the District Council, and no doubt they have a right to criticise and state objections, but the decision and responsibility of such decision must remain with the District Council.”

It will be observed that with regard to the Boroughs of Shrewsbury and Bridgnorth, both of which have a dual supply of water, spring water and river water, it is proposed to put in an installation of high pressure filters. By this means the suspended matter will be removed, the appearance of the water will be greatly improved, and at the same time there will be a very large reduction of micro-organisms. From the great improvement in appearance that will result in the Shrewsbury supply, where previously there has been no filtration, it follows that the water will be used to a greater extent for drinking purposes, and the question naturally arises whether the filtration to be adopted will be a sufficient safeguard.

Bacteriological tests appear to show that this method of filtration gives highly satisfactory results, but one of the most important safeguards of an ordinary scheme of river water filtration, viz., good storage, is here omitted. The importance of storage in connection with a river supply has recently been emphasized by Dr. Houston in dealing with the Metropolitan water supplies. Moreover the protection given by sufficient storage is one that can always be relied upon and is

not dependent upon the constant care of those in charge. The scheme cannot be looked upon as producing nearly the same degree of safety as a scheme with good storage and sand filtration, and consequently even although the water is not recommended to the public as a drinking water, the Medical Officer of Health is justified in advising frequent bacteriological examinations. It certainly seems a great pity that the Corporation have not been able to carry through a proper water scheme such as a town like Shrewsbury should certainly have.

In the Bridgnorth report it is not stated whether the intake of water is to be placed well above the outfall from the sewage works, or is to be left in its present objectionable position on the opposite side of the river, but slightly below the outfall.

EXCREMENT DISPOSAL.

The method of disposal of excrement except in the towns and large villages where there is a system of sewers, is generally speaking by means of privies with underground vaults. The system of disposal in some towns, *e.g.*, Shrewsbury and Oswestry, is entirely by water closets, in others, *e.g.*, Bishop's Castle, it is principally by privies, and in others the disposal is by water closets, pail closets, and privies.

In Ludlow a great effort has been made in consequence of a report made by Dr. Cranstoun and the Sanitary Inspector, to reduce the insanitary privy middens in the town. During the year 134 houses were provided with water closets, and the number of houses with privy middens was reduced by nearly one-third. It is to be hoped that this very important work will be continued, until all the privy middens which are insanitary either from their construction or position are abolished.

The conversion of privies to water closets is recommended in the reports for the following urban districts :—Bishop's Castle, Church Stretton, Newport, Oakengates, Wellington, and Whitchurch.

In many of the reports for rural districts the conversion of privies to earth closets is recommended.

The aim that sanitary authorities should keep in view with regard to this matter may be very briefly stated :—

1.—In districts with a good system of sewers, sewage disposal, and water supply, to make the water carriage system of excrement disposal universal. The success of this system depends to a great extent on the care and precautions with which it is carried out.

2.—In districts without sewers or water supply, to make a good type of earth closet universal.

To effect these improvements is by no means simple, and they can only be carried out by a large amount of detailed work. Every closet has to be dealt with separately and shown to be “insufficient” within the meaning of the Public Health Act. There are probably, however, very few privies which, either from their defective construction or unsatisfactory position, would not come within this meaning.

SEWERAGE AND DRAINAGE.

The various matters of detail connected with the sewerage and drainage of the districts will be found in Part II. of the Report.

It is extremely important that in every district where there is a system of sewerage, the drains should be submitted to the water test and thoroughly inspected before being covered up. In those districts where a sewerage scheme is being carried out, or is likely soon to be carried out, the District Councils would be well advised to adopt drainage regulations under sec. 21 of the Public Health Act, 1875, and provide means for the water testing of all new drains.

TABLE VII.
Record of Sanitary Work done during the Year 1908.

Table showing the work done by the various Sanitary Inspectors; the Returns are made on a uniform plan as far as possible.

SANITARY AUTHORITY.	PARTICULARS OF SANITARY MATTERS REFERRED TO IN THE ABOVE NOTICES.											PROCEEDINGS TAKEN BEFORE MAGISTRATES WITH REFERENCE TO															
	Number of houses which have been inspected during the year, either in connection with outbreaks of Infectious Disease, or in consequence of complaints, or in course of a Systematic Sanitary Survey.		Total Number of Notices of all kinds served, including both formal and informal Notices.		Number of such Notices complied with.		Houses to be disinfected after Infectious Disease.		Deficient or objectionable Water Supply.		New Drains to be constructed or old Drains to be amended.		New Closets to be provided or old ones to be amended in construction.		Houses damp, dirty, or admitting rain or weather, or otherwise in a bad sanitary condition.		Offensive Accumulations of all kinds.		Animals so kept as to be a Nuisance.		Houses Overcrowded.		Number of cases in which proceedings before Magistrates have been taken for failure to comply with any of the above Notices.		Exposure of Bad Meat for Sale.		
RURAL DISTRICTS.																											
Atcham ..	810	189	170	48	39	94	83	27	26	23	64	14	3	1	26	23	11	2	1	1	1	1	1	1	295		
Bridgnorth ..	2030	190	190	11	30	31	21	23	3	23	1	4	3	1	..	..	..	..	..	..	..	..	..	..	..
Burford ..	30	10	10	4	2	..	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8
Chirbury ..	386	165	125	1	10	42	62	26	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Church Stretton ..	597	21	18	1	1	3	4	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	71
Cleobury Mortimer ..	230	10	5	34	32	7	4	7	3	7	..	3	..	..	..	..	..	..	..	..	..	..	..	..	50
Clun ..	211	36	33	*8	2	3	5	5	..	23	4	1	..	..	..	..	..	..	..	..	..	..	..	..	55
Drayton ..	737	220	190	20	18	48	44	4	98	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ellesmere ..	500	16	13	15	1	5	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	120
Ludlow ..	250	55	45	50	several	several	several	10	20	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	50
Newport ..	250	21	17	*9	4	5	7	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	155
Oswestry ..	900	52	52	55	30	3	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	98
Shifnal ..	473	169	169	39	2	57	47	15	55	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	95
Teme ..	95	1	1	6	..	2	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12
Wellington ..	64	32	28	..	5	27	15	1	9	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	23
Wem ..	1681	98	97	27	13	29	6	5	10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	217
Whitchurch ..	98	28	19	24	9	6	7	2	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	73
URBAN DISTRICTS.																											
Bishop's Castle ..	258	7	7	..	..	..	..	4	2	1	10	2	1	..	..	..	..	..	..	..	..	..	..	..	1
Bridgnorth ..	900	15	12	44	2	14	6	8	10	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	20
Church Stretton ..	318	18	17	..	..	3	4	..	10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	87
Dawley ..	996	246	245	6	..	74	16	20	288	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	318
Ellesmere ..	350	29	29	18	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	28
Ludlow ..	239	170	158	9	..	30	100	2	5	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Newport ..	39	8	8	16	..	11	19	5	†1417	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	30
Oakengates ..	128	175	140	32	several	60	50	15	65	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	80
Oswestry ..	1500	63	60	52	..	50	16	8	14	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	30
Shrewsbury ..	1838	974	922	256	36	240	98	70	186	19	..	..	..	..	..	..	..	..	..	..	..	..	..	..	198
Wellington ..	453	200	180	34	..	14	74	43	3	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	121
Wem ..	702	84	82	6	..	19	17	3	†599	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	38
Wenlock ..	1302	347	256	*25	3	56	58	76	213	16	..	..	..	..	..	..	..	..	..	..	..	..	..	..	408
Whitchurch ..	526	155	143	67	8	51	48	12	70	13	..	..	..	..	..	..	..	..	..	..	..	..	..	..	62

* These houses were disinfected but are not included in the notices served.

† Loads.

‡ Includes supervision of public scavenging.

SEWAGE DISPOSAL.

Local Government Board Inquiries were held during the year into applications by the Oswestry Borough and Whitchurch Urban District Councils for sanction to borrow loans for the purpose of sewage disposal.

The only works carried out during the year for the prevention of the pollution of rivers were those of Wellington Urban and Wem Urban Districts.

There are schemes in hand for the treatment of the sewage of Ellesmere Urban District, Bishop's Castle Borough, Hadley and Admaston, and also for the improvement of the Whitchurch and Oswestry sewage works.

The following quotations from the District Medical Officers of Health's Reports show the position with regard to this matter.

Atcham Rural.—Moile Brace. “The Surveyor has, under the Council's direction been engaged in improving and increasing the facilities for treating the sewage at the outfall works. There are two settling tanks and the effluent is irrigated over the land before being discharged into the Rea Brook. The Surveyor states:—‘A considerable area of hitherto untreated land has been prepared for the reception of sewage, a part of which has been under-drained, and there is every reason to believe that the character of the effluent will, in time, show an improvement.’”

Pontesbury. “The Sanitary Surveyor's plans for sewerage and sewage disposal will shortly be completed for consideration by the Council.”

Bishop's Castle Borough. “The Council's plans for the needed improvement of the sewerage of the town, and particularly as to the outfall sewers and disposal of sewage, are well advanced. The scheme prepared by their engineers has been adopted, arrangements completed for the necessary land for new outfall works, and official sanction sought for a loan of £4,600 to carry out the work. The official inquiry into the application will be held shortly. The plans provide for the eventual complete sewerage of the town to one outfall, and treatment of the sewage on approved modern lines.”

Bridgnorth Urban. “The question of treating that part of the sewage which at present is discharged untreated into the river Severn has again been before the Sanitary Committee. Owing to the low level of a great part of the Low Town, which at times is flooded by the Severn, great difficulty will be found in formulating a suitable plan. An expert has, however, been engaged to prepare a report on the matter, which will, no doubt, receive very careful and serious consideration.”

Church Stretton Urban. “The Sewerage Scheme, initiated and carried out by the Council was completed in 1906, and the outfall works, situated some two miles to the south of the town, were opened in that year. The scheme has proved entirely efficient in providing satisfactory drainage for the District.”

Clun Rural District. “Clun town is seweraged for the most part, but only a small number of the houses there have water closets. The principal sewers of the town discharge into the Clun river. In recent years the Council has erected a flushing tank and ventilating shaft at the head of the chief sewer, and re-laid or extended the outfall pipes into the river. The Council, during 1907, had the disposal of the sewage under consideration, and employed a firm of engineers to report on the subject. Their report has been received.”

Dawley Urban. “The outfall of the main sewers is as a rule, into long open channels running through and out of the District and finally into water courses draining to the Severn.”

Ellesmere Urban. "The town is well sewered and the technical breach of the Rivers Pollution Act that has occurred is still under the consideration of your Council."

Ludlow Urban. "The re-constructed Sewage Disposal Works continue to act efficiently."

Ludlow Rural. "At Craven Arms the drainage is satisfactory, and the ultimate disposal of sewage is properly carried out."

Newport Urban. "The outfall works are some distance outside the town, and consist of grit chamber, open septic tank, and single contact filter, the effluent passing into the Strine brook below the town. A small area of land is available for treatment of storm water."

Oakengates Urban. "Many defects in the working of the sewage farm have been remedied."

Oswestry Urban. "The new sewerage works are now in a fair way to being carried out."

Shifnal Rural. "The Shifnal Sewage outfall works are turning out a satisfactory effluent."

Wellington Urban. "The new Sewage Disposal Works, consisting of detritus tank, septic tanks, and bacteria beds, are now at work, and, although at present a satisfactory effluent is not always secured, they promise to entirely do away with the pollution of the stream in the course of a few months."

Wellington Rural. "The amended Sewerage and Sewage Disposal Schemes for the parish of Hadley and the village of Admaston have been in the hands of expert engineers, and will shortly be forwarded to the Local Government Board for approval."

Wem Urban. "A scheme for the disposal of sewage is being carried out."

Wenlock Borough. "The outfall of most of the main sewers is either directly into the Severn, or into streams which fall into the Severn within the District."

Whitchurch. "The Surveyor reports that "The Council have decided to construct "at the Hadley Sewage Farm, new grit and septic tanks, with storm overflow, to assist "in the purifying of the sewage, and to take out the solids before allowing the sewage to "run on the grass land. The work will be put in hand as soon as possible, the sanction of "the owner of the farm having been obtained."

SCAVENGING.

No considerable advance appears to have been made in the scavenging of the towns and villages.

A good scheme of scavenging in towns is a matter of the greatest importance to the health of the community. This has been emphasized and made very clear by recent work in connection with the spread of disease by flies. The essentials of a good system of disposal of refuse are:—

(1) the provision of suitable movable receptacles covered so that their contents cannot blow about and so that flies cannot gain access, and

(2) regular and frequent removal which should be not less than once a week.

It may be mentioned that in Oswestry there is daily removal of refuse, and the Medical Officer of Health reports, with excellent results.

In 1907 I reported on the scavenging of Market Drayton and recommended a public system. A system has not been adopted, but I am convinced that systematic and frequent collection of house refuse would be of material benefit to the town.

The following quotations from the District Medical Officers' Reports show the amount of scavenging and the methods of scavenging in many districts.

Bishop's Castle. "The scavenging of privies and removal of house refuse is left to the householders. A "tip" for refuse is provided by the Council."

Bridgnorth Borough. "With regard to the disposal of refuse, I would advise all those who have not yet obtained portable receptacles for their refuse to do so. The Corporation carts empty all such receptacles regularly every week. Refuse pits can never be properly cleaned out, and are always a source of danger."

Church Stretton Urban. "The Council now carries out a weekly collection, having provided the necessary plant. A tip is secured outside the town."

Clun Rural. "There is no system of public scavenging in the District. A public tip is provided at Clun by the Council for householders to dispose of their refuse."

Cleobury Mortimer Rural. "There is little to complain of in the country districts, but at Cleobury the scavengage might be undertaken by the Council with advantage."

Dawley Urban. "The modified system of public scavenging which the Council ash adopted, and which I have previously described, is extending in use, and appears to work successfully."

Drayton Rural. "Occupiers are responsible, no public system being in force. The removal and disposal of refuse is regulated by bye-laws."

Oakengates Urban. "Many of the difficulties of this department have been ably overcome by the industry of your present Sanitary Inspector. The abolition or removal and reconstruction of inaccessible and awkward ash pits or privies, the substitution of bins for many of the former, together with systematic removal of the refuse have greatly altered the sanitary condition of the whole district."

Oswestry Rural. "The scavenging of some of the larger villages is much to be desired, but all such schemes in a rural district are difficult to manage and costly to carry out."

Newport Urban. "The scavenging of privies and removal of house refuse is undertaken by the Council, who have a staff and plant for the work, and a site outside the town for sorting and disposal of the refuse."

Shifnal Rural. "The scavengage (of the town) is done by contract, and is satisfactory."

Wem Urban. "Removal and disposal of house refuse is carried out by public scavengers."

Whitchurch Urban. "This system now provides for a weekly collection from about 220 houses, and has resulted in great improvement, in the abolition of numerous large insanitary ash pits in confined yards, and in the removal of heaps of refuse. The Surveyor, with myself, is of opinion that the advantage of this regular collection should be gradually extended, to other parts of the town. A good many bins have been provided in place of ash pits."

MILK SUPPLY AND INSPECTION OF DAIRIES, COWSHEDS, MILKSHOPS, AND DAIRY CATTLE.

The following table compiled from the District Medical Officers' Reports shows the amount of inspection in each district :—

URBAN DISTRICTS.	Number of Cow-keepers & Milk-sellers on Register.	Number of Inspections.	Number of Notices Verbal and Written	Number of Notices Complied with.	RURAL DISTRICTS.		Number of Cow-keepers & Milk-sellers on Register.	Number of Inspections.	Number of Notices Verbal and Written	Number of Notices Complied with.
Bishop's Castle ..	7	11	—	—	Atcham ..	..	145	308	70	59
Bridgnorth ..	48	130	12	10	Bridgnorth ..	..	18	45	21	21
Church Stretton ..	2	8	4	4	Burford ..	..	2	5	4	4
Dawley ..	24	42	25	25	Chirbury ..	..	—	—	—	—
Ellesmere ..	8	16	—	—	Church Stretton ..	..	26	84	7	7
Ludlow ..	15	4	—	—	Cleobury Mortimer ..	..	10	No record	—	—
Newport ..	16	32	—	—	Clun ..	..	5	13	3	3
Oakengates ..	27	108	12	12	Drayton* ..	..	—	—	—	—
Oswestry ..	23	40	12	12	Ellesmere ..	..	25	50	10	10
Shrewsbury ..	134	118	37	28	Ludlow ..	..	17	34	10	10
Wellington ..	27	115	27	24	Newport ..	..	38	115	65	65
Wenl ..	13	52	7	7	Oswestry ..	..	70	113	15	15
Wenlock ..	22	59	15	11	Shifnal ..	..	36	175	16	16
Whitchurch ..	25	90	2	2	Teme ..	..	2	6	—	—
					Wellington ..	..	24	24	1	1
					Wem ..	..	126	297	12	12
					Whitchurch ..	..	9	22	—	—

* A few inspections have been made but very little has been done in this department.

In many of the districts the number of inspections shows a marked improvement on the previous year. It is, however, very evident that in many of the rural districts only a small proportion of the cowkeepers are registered, and the number of visits is quite insufficient. The expectation of fresh legislation is to some extent standing in the way of the adoption of regulations by sanitary authorities.

Although procedure will be modified considerably and many matters that are now optional will be made compulsory if the "Milk and Dairies Bill" becomes law, it will be well to state briefly what is at present required of Sanitary Authorities in order to protect the milk supply.

(1) The registration of all Cowkeepers and Milksellers who come under the Order should be enforced.

(2) Satisfactory regulations should be adopted.

(3) A systematic inspection should be instituted, every cowshed, etc., being visited at least once a quarter, and those where the methods are unsatisfactory being visited more frequently. The inspection should be directed not merely to the structural condition of the buildings, but to their cleanliness, the cleanliness of the cows, milkers, vessels, and the general conditions of collection, cooling, storage, and transmission of milk.

(4) A systematic veterinary inspection of dairy cattle, principally in order to detect tuberculosis of the udder.

The object to be aimed at is to get clean, fresh milk from healthy cows.

The elimination of diseased cattle can only be done by the employment of periodic veterinary inspection. This is not carried out in any district in the County, nor does it seem to be a matter that can be well undertaken by small Local Authorities.

The other part of the problem is to a great extent a matter of education. The majority of the persons actually engaged in the collection and distribution of milk have formed habits which are entirely inconsistent with the production of a pure milk supply. It is not only necessary to get the cowsheds into a good structural condition, but it is even more essential to train the milkers, etc., in the habits of cleanliness and care necessary for the production of good milk.

Much can be done with this end in view by the inspectors on their visits to farms.

A foundation for this teaching might well be laid in the elementary schools where, without entering into minute details, the children might be taught how important it is that milk should be clean, and that dirty milk is unfit for food. It is probably not desirable, in teaching children, to enter into the details of any particular trade, but the necessity for extreme cleanliness in handling any kind of food, and more especially of milk, is a matter that should be impressed upon children on every opportunity. Probably in the older classes, in agricultural districts, it would be advisable to go further and to add more or less definite instruction on the subject.

The possibility of fixing a standard of purity for milk has exercised much attention, and if such a standard could be fixed it would be an enormous help. The number of bacteria has been suggested as a standard, but for obvious reasons it is quite unsuitable. The number of bac. coli, as a measure of dangerous contamination, may perhaps prove a suitable standard or perhaps the amount of deposit. If some such standard were adopted, and a penalty enforced where milk fell below it, a great improvement in the conditions under which milk is produced would quickly follow.

Until some such method of procedure is devised, the only practical measure is to seize milk, which is obviously dirty, as unfit for food. The inspection of milk for this purpose should be a routine practice.

The question of the provision of a plentiful, pure and convenient water supply for dairy farms is a very important one, and one that is not receiving the attention it should have from the sanitary authorities.

Experiments conducted during the years 1903 and 1904 at Harper Adams College appear to show that cows can be kept in the fields in the winter months without any diminution of the quality or quantity of the milk, and with an improvement in their condition. If the difficulties of management could be got over and cows kept in the fields the whole year and milked outside, the problem of a pure milk supply would readily be solved. It is very desirable that these experiments should be followed up.

If the experiments prove nothing else they certainly show that one need not be afraid of very free ventilation of cowsheds.

The Tuberculosis Order of 1909 just issued by the Board of Agriculture and Fisheries is a most important one, and taken along with the Milk Bill, if that bill becomes law, it will do much to prevent the spread of tuberculosis from animals to man.

Article 2 of the Order says :—

(1) Every person having in his possession or under his charge

(i) Any cow which is, or appears to be, suffering from tuberculosis of the udder, indurated udder or other chronic disease of the udder; or

(ii) Any bovine animal which is, or appears to be, emaciated from tuberculosis, shall without avoidable delay give information of the fact to a constable or etc.

(2) The person in charge has to take certain precautions with regard to the milk, and the isolation of suspected animals.

Under Article 3 a veterinary examination has to be made of animals reported under Article 2, and the inspector is empowered to take samples of milk, etc. If there is no tuberculosis, notice has to be served allowing precautions to be discontinued.

Under Article 4, the slaughter of a cow with tuberculous udder, or giving tuberculous milk, or of a bovine animal emaciated from tuberculosis may be ordered, with certain formalities and safeguards.

Articles 5, 6, and 7 deal with compensation. Article 7, sub. sec. 4, defines advanced tuberculosis on the lines laid down by the Local Government Board as justifying total condemnation of the carcase.

Article 8, the milk of a cow with chronic disease of udder or emaciated from tuberculosis shall not be mixed with other milk, and shall be boiled, until the cow has been examined by a Veterinary Inspector and the restrictions withdrawn. Under Article 9 such an animal shall be isolated so far as possible until examined and the restrictions withdrawn.

The remaining sections deal with suspected animals at markets, etc., cleansing and disinfection, reports, etc.

The Order has to be enforced by the County Council and notifications under Article 2 and reports under Article 3 have to be forwarded to the Sanitary Authority concerned.

The object of the Order is presumably in the first instance to prevent the spread of tuberculosis to human beings through milk, and also to diminish the amount of tuberculosis in cattle. Experience gained from the working of the model milk clauses make one very doubtful whether these objects will be attained to any considerable extent unless there is systematic veterinary inspection of milk cows. Such inspection is apparently contemplated by the Local Government Board judging by the Milk and Dairies Bill recently introduced into Parliament.

This bill provides for the first time for the registration of dairies and gives power to remove a dairy from the register.

The inspection of dairies and cowsheds is to be left in the hands of the Local Sanitary Authorities, but in default the County Council can take over the powers and duties of the District Council and charge the expenses of administration to the District Council. If the County Council fail in their duty the Local Government Board may take steps to enforce the Act. With regard to the inspection of dairies and the prohibition of milk supplies suspected of spreading infectious diseases, Sec. 4 of the Infectious Disease Prevention Act, 1890, has been much modified and the Model Milk Clauses incorporated. Power is given to the Local Government Board to require the appointment of veterinary inspectors for the purposes of this Act by County, Borough, or Urban District Councils; and power is also given to the Local Government Board to make orders dealing with many very important matters including the inspection of dairy cattle. Apparently the inspection of dairy cattle in rural districts is to be undertaken by the County Council. The bill is a far reaching one, but much will depend upon the orders made by the Local Government Board.

The term dairy in this bill includes any farm, farmhouse, cowshed, milk store, milk shop, or other place from which milk is supplied, *or in which, for purposes of sale or manufacture into butter or cheese, milk is kept or used.* By the inclusion of farms not selling milk, but making butter and cheese, the scope of inspection is very greatly extended.

A matter that will interfere greatly with the success of the Order and the Bill, if it becomes law, in stamping out tuberculosis, is that there is no power to insist upon isolation of tuberculous cattle, other than those suffering from tuberculosis with emaciation or tuberculosis of the udder. Legislation must necessarily proceed by stages, and no doubt the first step is to guard the present milk supply, but if tuberculosis amongst cattle

is to be diminished to any great extent all stages of tuberculosis must be dealt with, not necessarily by slaughter, but by isolation. This is the method adopted by Prof. Bang in Denmark, and the necessity for such action is emphasized by the *Third Interim Report of the Royal Commission appointed to inquire into the Relations of Human and Animal Tuberculosis* issued this year. The report is of importance with regard to two matters. It shows that the faeces of cows obviously suffering from tuberculosis of the lungs or alimentary canal must be regarded as extremely infectious, much more so than the matter discharged from the mouth or nostrils. The report also shows that milk from tuberculous animals may contain tubercle bacilli when there is no tuberculous lesion of the udder that can be detected before or after death.

From this report one may gather two facts :—

(i) That although the elimination of tuberculous disease of the udder is the main object at present to be aimed at, there will be no real security until tuberculosis in dairy cattle is completely got rid of, and (ii) that all tuberculous animals should so far as possible be kept apart from healthy ones in order to prevent the spread of the disease amongst cattle and to prevent contamination of the milk with tuberculous discharges.

MEAT INSPECTION.

Dr. Rose in his report on the Oakengates Urban District says :—“ The condition of the meat market is very much improved. There is reason to believe that our constant supervision has had a very marked effect on a certain class of outside butchers, and that doubtful meat, instead of being brought here as formerly, is disposed of in another County.”

“ The meat is brought to the market cut up into small sections, and in consequence in such a condition as to make it almost impossible to detect disease. Another attempt has been made to have a joint Meat Inspector for a number of districts, in some of which these slaughter-houses are, but has again signally failed, chiefly through the action of the Rural Councils.”

Dr. Gepp in his report on the Newport Urban District says :—“ During the year the Council organised a conference of Sanitary Authorities, and two meetings were held representative of seven local Sanitary Authorities. The matter was thoroughly discussed, but it has not been found possible so far to secure joint action or to overcome existing difficulties in the appointment of a skilled expert to exercise supervision over the slaughtering of animals and traffic in meat over a comprehensive area. A good deal might still be done locally to supervise the ‘ Emergency ’ butchering business, if the Council could arrange with an expert and appoint him to undertake the work in the District.”

I have previously pointed out the difficulty in the way of small districts carrying out meat inspection satisfactorily, and have suggested a combination of Newport Urban and Rural Districts, Oakengates Urban District, and Wellington Urban and Rural Districts for this purpose. It has not been possible to effect a satisfactory combination. It however appears probable that future legislation will necessitate a county public health veterinary service for the purpose of safeguarding the milk supplies, and such a service cannot fail, whether directly authorised or not, to be of use in helping to prevent the sale of unsound meat.

INSPECTION.

The work of sanitary inspection in the various districts is summarised on Table VII. It is evident from the number of inspections that in few districts is a systematic house to house inspection carried on with any intention of getting through all the houses within a reasonable period. An inspection of this description is the only satisfactory basis of sanitary work. I must again call attention to the small number of house inspections made in the Rural District of Wellington.

In this district during the last nine years only 961 houses have been inspected out of a total of 2,500, and this number includes not only those houses systematically inspected but also houses visited on account of infectious disease and complaints. It is quite true that previous to this

period a systematic house to house inspection was made, but the inspections made during the last nine years are quite insufficient for the purpose of detecting sanitary defects and causing the houses to be maintained in a sound condition.

FACTORIES AND WORKSHOPS.

Details of the inspection of factories and workshops are given on Table VIII., and summaries of the remarks of the medical officers will be found in Part II. of the report.

The lists of out-workers are still very small in number, notwithstanding that special attention has been called to this matter by the Home Office. It is difficult to believe that there are no out-workers in such towns as Oswestry and Bridgnorth.

FOOD AND DRUGS.

Return showing the number, description, and result of analyses of samples taken during the year 1908, and the subsequent action taken.

Nature of Sample.	No. of Samples taken.	Result.		Remarks.
		Genuine.	Adulterated.	
Brandy	6	6	..	
Gin	12	11	1	Vendor convicted.
Rum	11	11	..	
Whisky	30	26	4	2 convicted, 1 dismissed and 1 ordered to pay costs.
Arrowroot	6	6	..	
Butter	35	27	8	The 8 samples contained Boric Acid but not in sufficient quantity to justify proceedings.
Coffee	11	11	..	
Cheese	4	4	..	
Flour	2	2	..	
Ginger	12	12	..	
Lard	10	10	..	
Milk	48	44	4	2 convicted and 2 dismissed.
Mustard	6	5	1	Vendor protected by label.
Oatmeal	9	9	..	
Pepper	18	18	..	
Sausage	5	3	2	The 2 samples contained Boric Acid but not in sufficient quantity to justify proceedings.
Tea	8	8	..	
Linseed Meal	1	1	..	
Jam	4	4	..	
Vinegar	1	1	..	
	239	219	20	

Fifty-six samples were also taken in the Borough of Shrewsbury, of which three were found to be adulterated. Proceedings were taken in these cases but two were dismissed and the third withdrawn.

Considerable attention is being paid to the question of preservatives, but in no instance has any preservative been found in sufficient quantity to justify proceedings.

No preservative whatever has been found in any sample of milk.

Attention was called during the year to the unsatisfactory methods of sampling, and arrangements were made for employing women where necessary for making the actual purchases.

FACTORY AND WORKSHOP ACT, 1901.

SUMMARY FOR 1908.

MIDWIVES ACT.

Another year's working of this Act has confirmed one in the opinion that it will in the long run be productive of an enormous amount of good. To effect much improvement in the practice of some of the old midwives except with regard to the important matter of cleanliness, is often impossible, but gradually they are being replaced by properly trained persons who will not only be able to undertake efficiently the duties of a midwife, but who will also be able under proper direction to teach mothers the elementary facts with regard to feeding of infants. (See page 52).

As pointed out in previous reports, the number of midwives who have become certified has greatly exceeded the estimate formed. The estimate of the amount of time, that the inspection of midwives in the county would take up, was based upon the idea that about 200 midwives would become certified, whereas there are at the present time 309 on the register. It has consequently not been possible to give the amount of attention to each midwife that one had hoped for, and it has not been possible to inquire systematically into notifications of medical help, deaths, and still-births.

The following tabular statement gives the number of visits paid in each quarter of the year by the Inspector of Midwives and the number of notifications of various kinds received :—

Visits paid.	Notifications of having sent for medical help.	Notifications of still-births		Notifications of death of mother or child with no medical man in attendance.
		By Midwives	By Parish Clerks.	
First Quarter	191	114	22	65
Second Quarter	280	130	26	54
Third Quarter	241	147	21	50
Fourth Quarter	156	113	22	51
Total	868	504	91	220
				13

The number of visits were slightly in excess of that of the previous year. The average number of visits per midwife during the year was 2.8, which means that the midwives were visited on an average at intervals of 4.3 months. Probably apart from special investigations a visit every three months should prove effective, but there are midwives who should be visited more frequently.

Miss Frith reports that the midwives on the whole show greater readiness in conforming to the rules. She finds it, however, almost impossible to teach many of them to read a thermometer satisfactorily, or even to understand the importance of taking a temperature daily. Instruction is given on this matter to the ignorant midwives at every visit.

Miss Frith again draws attention to the importance of inspecting the midwives whilst at work. It is, of course, the only means by which one can ascertain with certainty whether a midwife is carrying out the rules or not. A bag, appliances, disinfectants, washable dresses, etc., may be provided but not used satisfactorily. Little has been done in this respect during the year, but in the few cases visited, the cleanliness of the mother and child was quite satisfactory. It is intended that during the present year this work shall receive special attention, even though the actual number of visits to midwives will have to be correspondingly lessened.

The inspection of midwives is already an important means of spreading knowledge of the true principles that apply to the feeding and care of infants. This is made a subject of personal instruction by the inspector on her visits, and leaflets specially drawn up for the purpose are given to the midwife for her to leave with and explain to the mothers. There is evidence, that both the midwives and the mothers they attend, are interested in this teaching, and are deriving benefit, but in the majority of cases the methods of hand feeding employed are still radically wrong. It is encouraging however to know that the experience of the inspector points to the fact that in the country districts the majority of children are fed on the breast for a longer or shorter period.

Notifications of sending for Medical Help. The number of notifications was considerably in excess of those received in 1907. The number of notifications received each year since the Act has been in operation was :—in 1905 (6 months), 83, in 1906, 325; in 1907, 385; in 1908, 504. The numbers are steadily increasing, and the increase indicates both greater conformity to the rules in sending in notifications and that medical help is sent for more frequently. The great increase in the number of notifications in 1908 was due to the fact that non-compliance with the rules in this respect is now looked upon as an offence that will be reported to the Local Supervising Authority. There can be no doubt that one of the most important matters in the administration of the Midwives Act is to insist that medical help shall be sent for on every occasion where necessary. It is almost impossible to ensure that this is done unless all the formalities in connection with sending for medical help are rigidly carried out. It is very satisfactory to be able to record that in most districts the difficulties in the way of obtaining medical help for poor women in emergencies have been considerably lessened by the action of the Boards of Guardians.

Notifications of Still-births. The rule making it compulsory for a midwife to notify any still-birth she may attend is an important one, and although it has not been possible so far as a routine practice, to make inquiries into these cases, the possibility of inquiry is a considerable safeguard. In order to obtain an independent return of still-births as a check, the parish clerks and the cemetery authorities have been asked to supply me with particulars of still-born children who are in future buried in their burial grounds. All the cemetery authorities, with two exceptions, and practically all the parish clerks or the clergy acting for them, have very kindly undertaken to supply me with this information, and my thanks are due to them. The notifications thus received have been a considerable help in carrying out the Act.

In last year's report I stated that a systematic inquiry into all still-births occurring in the practice of midwives would throw light upon many matters, and amongst others it would enable one to estimate the frequency of the various causes of still-birth. The causes of still-births may be grouped for our purposes into two classes, (1) those operating before labour commences, (2) those operating during the birth of the child. It is particularly in the latter class of cases that lives may be saved by skilled attention.

By careful inquiry into all cases of still-births, it would be possible at least to some extent :—

- (1) To estimate the amount of child life lost at present by the absence of skilled attention.
- (2) To lessen the amount of this loss by insisting upon midwives getting medical help sufficiently early. This will no doubt be greatly helped forward by educating the midwives in the signs of abnormalities.
- (3) To prevent the return of children as still-born who have lived.

The time at the disposal of the inspector has not allowed of such an inquiry being made, but owing to the more complete manner in which the notifications are now filled in, certain information is available.

Two hundred and forty-six notifications of still-births have been received from midwives and Parish Clerks and Clerks to Burial Boards.

82	of the cases were attended by medical men, no midwife being in attendance.
92	," " " by certified midwives without medical assistance.
4	," " " by uncertified midwives.
65	," " " by both medical men and midwives.
3	," " " no information obtained.

Eighty-two or 33 per cent. of the cases occurred in the practice of medical men, and for 65 or 27 per cent., medical help was obtained. In 60 per cent. of the cases, therefore, a medical man was in attendance.

The returns sent in by the certified midwives, although incomplete, show that they attended 4,528 births in 1908 out of a total of 5,884, leaving less than 1,356, or 23 per cent., to be attended by medical men and uncertified midwives. It is obvious, therefore, from these figures, that still-births occurred more particularly in the practice of medical men, and this is explained by the fact that still-births are frequently due to some complication or abnormality which may necessitate the engagement of a medical man beforehand, or make it imperative to call in medical help during labour.

Analysis of the notifications of still-births sent in by the midwives shows that 55 of the children were at full time and 33 were premature. As regards the condition of the child no statement was made in 33; in 24 the evidence pointed to death during labour; in 33 there was evidence of death some days at least previous to labour. The presentations were head 44, breech 8, footling 6, not mentioned 32. The sex of the children was as follows:—54 males, 30 females, and 6 not mentioned.

These figures, although incomplete, are of some value in showing the number of children that might possibly have been saved if skilful attendance had been available at the time of confinement. It is particularly in breech presentation (including footlings) that skilful and rapid completion of delivery is likely to save life. It seems a pity that the rules of the Central Midwives Board allow a midwife to attend uncomplicated breech presentations except in primipara, because when complications arise it is usually too late to send for medical help.

Notifications of deaths of mother or child with no medical man in attendance. The notifications that the police have kindly sent me have been of the greatest use in bringing to light cases that the midwives should have reported. In many of these cases, they had been seriously at fault in not sending for medical help in accordance with the rules. There is undoubtedly a great laxity upon the part of many midwives, particularly when it is the child that is ill, and this laxity, in my opinion, very considerably increases the infantile mortality. A more serious view of the conduct of midwives in these cases is now taken, and no less than 6 midwives were censured on this account by the Local Supervising Authority.

Puerperal Fever. Sixteen cases of puerperal fever were reported in 1908. Twelve of these were attended by certified midwives, and of the remaining 4, two were attended by uncertified midwives.

Six of the midwives were formally suspended on account of non-observance of rules for the prevention of infection, and two were cautioned after being reported to the Local Supervising Authority. Six midwives were informally suspended until they had ceased attendance on the infectious case and disinfected satisfactorily.

In only one instance was there any suspicion that the midwife had been the means of spreading infection. Two cases occurred in her practice; after the first she was suspended until she had disinfected satisfactorily, and after the second she was formally suspended for a period of two months.

Facilities afforded to Midwives for obtaining prompt Medical Assistance. It has been felt since the Midwives Act came into operation that there should be some provision made by which a midwife can obtain prompt medical assistance in case of emergency, and that the medical fee in the case of persons too poor to pay, should be guaranteed by some public authority.

Early in the year a communication was received from the Privy Council containing an extract from a circular letter sent by the Local Government Board to all Boards of Guardians throughout the country. The gist of the communication is contained in the following paragraph :—

“ The Board would suggest that medical men and certified midwives practising in the Poor Law Union should be informed that, in cases arising under Rule 18, the Guardians will, on being satisfied that the woman is too poor to pay the medical fee, be prepared to exercise their powers under the Section and to pay a reasonable remuneration to the medical man called in. Any such payments should be on a definite scale which should be suitable to the local circumstances and to the services rendered, and which should be duly notified to the local medical practitioners.”

The object of this suggestion is to ensure that a midwife shall have in cases of emergency medical help with the least possible delay.

In consequence of this letter, communications were sent to all the Boards of Guardians asking them what steps they were taking with this end in view. After considerable correspondence the majority of the Boards have adopted measures which apparently will ensure medical help when required.

The action taken by the various Boards may be briefly summarised thus :—

Atcham, Church Stretton, Clun, Drayton, Ellesmere, Ludlow, Madeley, Newport, Seisdon, Shifnal, Tenbury, Wellington, Wem, and Whitchurch Boards have made arrangements for the payment of medical fees under certain conditions. The fees decided upon vary to some extent in the different Unions, but the conditions imposed are practically identical. The case must be one of urgency, the Poor Law Medical Officer must be sent for where possible, and the person relieved must be unable, on account of poverty, to pay the fee herself.

The reply of Bridgnorth Board was :—“ As regards necessitous out-door cases, where relief is not actually given, the District Medical Officer renders assistance on an order being given by the Relieving Officer, and is paid therefor by the Guardians.”

“ All midwives on the list for this district will in due course be informed that such medical assistance as they may deem necessary to obtain, in cases of poor persons, will be paid for by the Guardians.”

This communication is somewhat vague, but it appears to give the midwives permission to call in a medical man at the Guardians’ expense in cases of poverty. If so, this is satisfactory.

Oswestry Incorporation has forwarded the following resolution :—“ That the Certified Midwives in the district be notified that in case of urgency and destitution they may apply to the District Medical Officer for his attendance under Sec. 2 of the Poor Law Amendment Act, 1848 (11 and 12, Vict. Cap. 110).”

This resolution presumably allows a Poor Law Medical Officer to be summoned without a formal order, but it does not deal with cases of emergency in which the Poor Law Medical Officer lives at a considerable distance.

The Knighton Board have replied that the matter is under consideration, and the Forden and Cleobury Mortimer Boards that no special arrangements are necessary.

Suspensions. Nine midwives were formally suspended, either with the authority of the Chairman, or by the Local Supervising Authority. Four of these suspensions were on account of the midwives not providing themselves with disinfectants and appliances.

MIDWIVES REPORTED TO THE LOCAL SUPERVISING AUTHORITY.

OFFENCE.	ACTION TAKEN BY THE LOCAL SUPERVISING AUTHORITY.
(1) Failure to send for medical help for a premature child that was not taking food ; omitting to visit for two days whilst child was in a critical condition ; failure to notify death ; and failure to keep register.	Reported to the Central Midwives Board and removed from the roll.
(2) Failure to provide register, disinfectant, and some of the necessary appliances ; she also refused to conform to rules.	Reprimanded and suspended until rules conformed to.
(3) Register not properly entered up ; appliances dirty ; not notified sending for medical help.	Censured.
(4) Attended a miscarriage without medical help ; no thermometer or disinfectant.	Censured and suspended until rules conformed to.
(5) Practising after suspension.	Censured.
(6) No disinfectant or washable dresses.	Suspended.
(7) Not sending for medical help for a premature child.	Cautioned.
(8) Attending two cases of purulent ophthalmia and not advising that medical help should be sent for in the prescribed way ; and employing her daughter as a substitute.	The midwife attended and was severely censured and details of her offences forwarded to the Shrewsbury Dispensary.
(9) Practising as a midwife whilst suspended by the Local Supervising Authority.	Reported to the Central Midwives Board and removed from the roll.
(10) Practising whilst suspended, and without giving notice under Sec. 10 of the Act.	Consideration postponed as Midwife unable to attend on account of illness. Midwife has ceased to practice.
(11) Medical help not sent for in accordance with Rule 19 (5) for a weakly and premature child.	Cautioned.
(12) Not having a bag and appliances in accordance with Rule 2.	Suspended.
(13) Medical help not sent for in accordance with Rule 19 (5).	Cautioned.
(14) Medical help not sent for in accordance with Rule 19 (5).	Cautioned.

OFFENCE.	ACTION TAKEN BY THE LOCAL SUPERVISING AUTHORITY.
(15) Attending a case for 4 days after confinement instead of 10 days, and other minor offences.	Cautioned.
(16) Attending a case for 6 days only after confinement.	Cautioned.
(17) Not having a disinfectant or thermometer.	To be suspended unless in the meantime she has conformed to the Rules in this respect. Midwife got necessary appliances.
(18) The midwife attended a premature and weakly child, and did not advise that medical help should be sent for on a proper form, in accordance with Rule 21, nor did she notify the Local Supervising Authority, in accordance with Rule 20 (1) (a).	Censured.
(19) The midwife attended a weakly child and did not advise that medical help should be sent for on a proper form, in accordance with Rule 21; nor did she notify the Local Supervising Authority, in accordance with Rule 20 (1) (a).	Censured.
(20) The midwife laid out the dead bodies of two persons who had died from diphtheria, on whom she was not in attendance at the time of death, and whilst she was in attendance on confinements in contravention of Rule 16.	She was severely censured and informed that she must not in the future lay out the dead under any conditions whatever.

The present supply of Midwives in the County. On June 18th, 1909, there were 309 midwives registered as practising in the County.

This number is almost double what would be required if all the midwives were in a position to undertake an ordinary amount of work and were distributed to the best advantage throughout the County.

To estimate the real supply one must consider the age, training and general capabilities, and the distribution of the midwives.

Ages, etc. The following statement as to the ages of the midwives is as nearly accurate as information permits :—

84	midwives	between 50 and 60 years of age.
48	„	60 and 70 years of age.
23	„	over 70 years of age.

The increase in number of those over 70 years of age is due to the Old Age Pensions Act, and a consequent more correct statement of age.

Of the 309 midwives who are on the County Register, 81 are properly trained, and the remaining 228 are on the Roll because they were in practice for 12 months before the passing of the Act. Twenty-two of these latter have had some form of training although they have not passed any examination. Thirteen of the midwives although practising in the County live outside.

The following figures are very important showing as they do that a large proportion of the midwives do little or no midwifery work, and that this must be taken into account in estimating the supply to the county.

MIDWIVES GROUPED ACCORDING TO NUMBER OF CONFINEMENTS THEY ATTENDED IN 1908.

(a) TRAINED MIDWIVES.

Number who have not sent in returns of confinements	2
" " " attended no confinements	4
" " " less than 10 confinements	30
" " " between 10 and 20 confinements	22
" " " " 20 and 30	10
" " " " 30 and 40	5
" " " " 40 and 50	1
" " " " 50 and 60	1
" " " " 60 and 70	1
" " " " 70 and 100	1
" " " " 100 and 200	2

(b) UNTRAINED MIDWIVES.

Number of Midwives who have not sent in returns of confinements	18
" " " attended no confinements	9
" " " " less than 10 confinements	113
" " " " between 10 and 20 confinements	54
" " " " " 20 and 30	24
" " " " " 30 and 50	10
" " " " " 50 and 70	9
" " " " " 70 and 100	1
" " " " " over 100	2

This analysis shows clearly that only a comparatively small number of midwives are making a living by this work. Unless a midwife is attending at least 50 cases a year she must have some other source of income, and applying this test it will be seen that only 17 or 5.5 per cent. can rely upon midwifery alone.

This statement with regard to the number of midwives, their ages, qualifications, etc., gives one a very imperfect notion of the sufficiency of the supply of midwives throughout the County. The most important matter is to ascertain how each district is supplied, and with this end in view the Parishes were classified in last year's report in four groups:—

1. Parishes fairly well supplied with trained midwives.
2. Parishes well supplied with untrained midwives (many of these are becoming less active and capable of doing their work each year).
3. Parishes poorly supplied either on account of distance from a midwife, or for some other reason.
4. Parishes with practically no supply.

It was pointed out that the classification could only be regarded as an approximate one, but that it would prove of considerable help in gauging the necessity for special effort in the different parts of the county to provide a supply of midwives, and that no doubt information would be gained during the year which would enable one to produce a more accurate classification in next year's report.

The classification is repeated in this report with alterations made on account of information obtained during the year.

UNION.	Parishes fairly well supplied with trained Midwives.	Parishes well supplied with untrained Midwives (many of these are becoming less active and capable of doing the work each year).	Parishes poorly supplied either on account of distance from a Midwife or other cause.	Parishes with practically no supply.
ATCHAM.	I. Langley. Yockleton. Acton Burnell. Alberbury. Astley. Binton. Con Glover. Cound. Cressage. Fitz. Ford. Frodesley. Pitchford. Preston Gubbals. Stapleton. Sutton. Westbury. Shrewsbury. Ruckley. Worfield. Linley. Burwarton. Nenton. Cleobury North. Ditton Priors. Bridgnorth.	II. Church Pulverbateh. Great Hanwood. Melverley. Meolc Bracc. Montford. Shrawardine. Uffington. Upton Magna. Minsterley.	III. Battlefield. Church Preen. Kenley.	IV. Albrighton. Atcham. Berrington. Eaton Constantine. Habberley. Hughley. Pontesbury. Uppington. Wollaston. Wroxeter. Withington. Harley. Leighton. Shineton.
BRIDGNORTH.		Chelmarsh. Claverley. Oldbury.	Eardington. Middleton Scriven. Willey.	Acton Round. Alveley. Ashley Abbotts. Aston Eyre. Billingsley. Chetton. Deuxhill. Glazley. Monkhopton. Morville Quatt Malvern. Romsley. Sidbury. Stanton Long. Tasley. Upton Cressett. Easthope. Shipton.
CHURCH STRETTON.	Acton Scott. Little Stretton. Longnor.	All Stretton. Cardington. Church Stretton. Eaton-under-Heywood. Leebotwood. Rushbury. Sibdon. Wistanstow.	Smethcott. Woolstaston. Hope Bowdler.	
CLEOBURY MORTIMER.	Stottesden. Cleobury Mortimer. Coreley. Kinlet. Milsom. Neen Savage. Neen Sollars. Wheathill. Clunbury. Bishop's Castle Urban. Bishop's Castle Rural.	Aston Botterell. Farlow. Loughton. Silvington.	Highley. Woodliouse. Hopton Wafers.	
CLUN.		Edgton. Hopesay. Lydham. More. Norbury. Shelve. Wentnor.	Clun. Lydbury North. Myndtown.	Clungunford. Hopton Castle. Mainstone. Ratlinghope.

UNION.	Parishes fairly well supplied with trained Midwives.	Parishes well supplied with untrained Midwives (many of these are becoming less active and capable of doing the work each year.)	Parishes poorly supplied either on account of distance from a Midwife or other cause.	Parishes with practically no supply.
		I.	II.	III.
DRAYTON.	Drayton-in-Hales. Ercall Parva or Child's Ercall. Mornton Say. Cheswardine. Adderley. Titterley. Stoke-upon-Tern.	Hinstock.	Hodnet.	
"		Norton-in-Hales.	Woore.	
ELLESMORE.	Baschurch. Ellesmere Urban. Hadnall. Hordley. Myddle. Cockshutt. Welshampton.	Ellesmere Rural. Great Ness. Little Ness.		
"				
FORDEN.	Worthen (part of)	Brompton & Rhiston. Chirbury.	Worthen (part of)	
"				
KNIGHTON.		Bettws. Llanfair Waterdine.		Bedstone. Bucknell. Stowe.
"				
LUDLOW.	Tugford. Ashford Bowdler. Ashford Carbonel. Bitterley. Bromfield. Caiuham. Culmington. Diddlebury. East Hamlet. Holdgate. Ludford. Munslow. Stanton Lacy. Stokesay. Ludlow. Stoke St. Milborough.	Abdon. Halford & Dinchop. Heath. Onibury. Hope Bagot.	Cold Weston. Clee St. Margaret.	Hopton Cangeford.
"				
MADELEY.	Dawley Magna. Madeley (part of) Much Wenlock.	Buildwas. Stirchley. Benthall. Broseley. Madeley (part of) Posenhall.	Barrow. Much Wenlock (part of)	Little Wenlock.
"				
NEWPORT.	Cherrington. Chetwynd. Chetwynd Aston. Church Aston. Edgmond. Lilleshall. Longford. Newport. Tibberton.	St. George's. Woodcote.		
"				

UNION.	Parishes fairly well supplied with trained Midwives.	Parishes well supplied with untrained Midwives (many of these are becoming less active and capable of doing the work each year).	Parishes poorly supplied either on account of distance from a Midwife or other cause.	Parishes with practically no supply.
	I.	II.	III.	IV.
OSWESTRY INCORPORATION.	Ruyton-of-the-Eleven Towns. Saint Martin's. Selattyn. Weston Rhyn. Oswestry Urban.	Kinnerley. Knockin (including Heath Farm). Llanyblodwell. Llanymynech. Oswestry Rural. Sychdyn. Whittington (including Halston).	West Felton.	
SEISDON.		Rudge.		
SHIFNAL.	Shifnal. Stockton. Sutton Maddock.	Kemberton. Prior's Lee. Sheriffhales. Tong.	Boscobel. Ryton. Beckbury. Badger.	Albrighton. Bonningale. Donington.
TENBURY.	Boraston & Whatmore Burford. Greet. Nash, Tilsop & Weston. Whitton.			
WELLINGTON.	Bolas Magna. Eyton-upon-the Wildmoors. Waters Upton. Wellington Urban. Wrockwardine. Kinnersley. Wrockwardine Wood.	Ercall Magna or High Ercall. Hadley. Rodington. Wellington Rural. Wombridge.	Longden-upon-Tern. Preston-upon-the Wildmoors.	
WEM.	Broughton. Clive. Grinshill. Loppington. Moreton Corbet. Shawbury. Stanton-upon-Hine Heath. Wem Rural. Wem Urban. Weston.	Lec Brockhurst. Prees. Whixall.		
WHITEHURCH.	Ightfield. Whitchurch Urban. Whitechurch Rural.			

In some of the parishes in Col. IV. it is said that there is no necessity for a midwife, as medical men attend all cases of confinement.

Miss Frith reports that she has knowledge of uncertified midwives practising in the following localities :—Stiperstones, Mainstone, Clun Forest, Lydbury North, Kempton, Walcot, Bucknell, Bedstone, Stow, Hopton Heath, Hopton Castle, Cold Weston, Clee St. Margaret, Abdon, Netchwood, Monkhopton, Aston Ayres, Morville, Tasley, Chetton, Easthope, Presthopy, Church Preen, Hughley, Bourton, Alveley, Doddington, and Hopton Wafers, Uppington, Eaton Constantine, Leighton, Berrington, Atcham, Wroxeter, Home, Shineton, Withington, Donnington and Albrighton, Hordley and Westbury.

In the majority of these districts there will probably be a distinct scarcity of midwives after April 1st, 1910, when these uncertified women will have to cease practise.

Future Supply of Midwives.—The approach of 1910, when uncertified women will no longer be allowed to practise for gain is being looked forward to in many parts of the country with considerable apprehension. Fortunately in this county, on account of the large amount of trouble that was taken at the time, the great majority of the practising midwives became certified, so that although the exact number of confinements now attended by uncertified women is not known, it is not anticipated that the regulation which comes into force in 1910 will cause any general difficulty throughout the county. There are, however, undoubtedly districts in which there will be very serious difficulties, and these districts have already been indicated so far as our knowledge allows.

The time for action in providing midwives for those districts, that will be without a supply in 1910, is rapidly passing by, and little is being done.

The County Council have from time to time urged on the parishes to make this provision.

On October 30th, 1907, the following letter together with an extract from my Annual Report for 1906 dealing with this question was sent to every Parish Council and the Incumbent of every Parish in the County :—

“ SIR,

MIDWIVES ACT, 1902.

SUPPLY OF MIDWIVES IN COUNTRY DISTRICTS.

The Salop Local Supervising Authority have had under consideration a report of the Medical Officer of Health dealing with the future supply and maintenance of Midwives. The report shows that there is likely to be a great scarcity of midwives in the country districts of the County in the near future unless some provision is made. The suggestion is put forward that the difficulty can only be met in those districts where midwives cannot support themselves, by the formation of Local Nursing Associations.

In order that each parish shall be able to fully consider this matter, the Local Supervising Authority have desired me to forward for your information the enclosed excerpt of the Report referred to.

I am,

Your obedient Servant,

E. CRESSWELL PEELE.

On November 26th, 1908, in accordance with instructions from the Sanitary Committee, I sent the following letter to the Parish Clerks and Incumbents of all the Parishes that so far as our knowledge went, were without a supply of midwives :—

“ DEAR SIR,

From an investigation which I have made into the supply of midwives throughout this County, I find that your parish has practically no supply of certified midwives, and that consequently after year 1910 no women will be available for this purpose.

It is of course possible that attendance by medical men is always available and that no provision is necessary, but if this is not so, I would call your attention to the very serious condition of affairs that will arise, and ask you to give it your earnest attention.

The most practical way of dealing with this question is to form a Nursing Association and to engage a midwife.

If you contemplate doing this, you can obtain all information by applying to the Superintendent of the Shropshire Nursing Federation, Newport, Salop.

I shall be glad to give you any advice or assistance in my power.

Yours sincerely,

JAMES WHEATLEY.”

Replies were received from only about a quarter of the Parishes, and in most cases the reply was to the effect that there was really no necessity for a midwife as medical help was always available. Still there can be no doubt that when the provisions of the Act are enforced in 1910, there will be a great outcry in some districts, and the fact that five years have been allowed as a period of preparation will be entirely overlooked.

In those districts where there is no certified midwife in 1910, all confinements will have to be attended by medical men, and the uncertified women who so far have been allowed to attend as midwives, will in future only be allowed to attend with a doctor, *i.e.*, as monthly nurses. There can be no doubt that this will considerably increase the number of cases in receipt of poor-law medical treatment.

The position of the County Council with regard to the provision of midwives is frequently misunderstood, and may for the sake of clearness be stated. The County Council as the Education Authority have power to train nurses and actually do train a number every year. The County Council as the Local Supervising Authority is entrusted with the supervision of all the midwives and has the duty of enforcing the provisions of the Midwives Act and rules in the County, but has no power either to train or to support midwives. The Local Supervising Authority has done all in its power to impress upon the localities concerned the necessity for looking forward and making provision beforehand.

Provision can be made by the formation of Local Associations, to which Boards of Guardians can contribute, in so far as the Association nurses attend pauper patients or patients who would otherwise be in receipt of poor-law medical relief. The formation of such associations, particularly in thinly populated districts, would be helped forward considerably if the nurse engaged could undertake any school nursing required.

Many parishes are much too small to support a nurse, and in these cases the difficulty can only be overcome by the proper grouping of parishes.

Another means of providing midwives has been suggested, viz., that women should be trained in order that they shall practise in their own localities where they probably have other means of subsistence. This is a continuation of the present system, trained women being substituted for untrained ones. In the event of it being found impossible to start an Association for every locality where a midwife is required, this suggestion appears to be the only alternative.

Training of Midwives. The County Council made a grant of £180 for the year 1908 to the Shropshire Nursing Federation, for the training of nurses, on the understanding that the Federation should bear one quarter of the training of each nurse. According to the Treasurer's statement eleven nurses were trained and equipped by the Federation in 1908.

It is somewhat difficult to estimate the number of nurses that will be required in the near future, but probably at least twelve should be trained each year.

Lectures to Midwives in Practice. These are being continued and are much appreciated by those who attend. A course of lectures was given at Oswestry towards the end of the year, and since then a very successful course has been given at Wellington.

RAINFALL.

I am able to publish figures for the county through the kindness of the observers, who at considerable trouble to themselves have furnished me with full particulars.

STATIONS.	RAIN GAUGE.			DEPTH OF RAIN.		DAYS ON WHICH .01 OR MORE RAIN FELL.			
	Diameter	Height above ground.	Height above sea level.	1907	1908	1907	1908		
				inches.	ft. in.	feet.			
LUDLOW ..	.. (The Sheet)	.. ..	5	1 0	370	33.82	31.09	182	149
" ..	.. (Ashford Hall)	.. ..	5	0 5	315	—	32.14	—	174
BROMFIELD	.. (Oakley Park)	.. ..	5	1 0	300	30.19	29.56	220	216
" ..	.. ( )	.. ..	5	1 0	320	30.41	30.10	201	195
CLUNBURY	.. (Vicarage)	.. ..	5	1 0	500	32.60	27.70	176	137
BISHOP'S CASTLE	(Vicarage)	.. ..	—	—	596	36.31	30.66	218	209
" ..	(Totterton)	.. ..	5	0 7	700	34.26	28.49	—	197
" ..	(Castle Street)	.. ..	5	2 0	720	32.60	27.70	202	185
" ..	(More Rectory)	.. ..	6	1 0	600	32.39	28.22	—	—
BRIDGNORTH	.. (Coton Hall)	.. ..	5	1 6	460	28.77	28.32	186	165
" ..	(Hookfield House)	.. ..	5	1 0	273	28.30	27.31	220	189
" ..	(Cantrey Bank)	.. ..	6 $\frac{1}{2}$	4 0	320	21.165	23.83	153	150
BROSELEY	.. (Willey Park)	.. ..	5	1 0	501	28.30	28.46	204	182
CAVEN ARMS	.. (Stokesay Vicarage)	.. ..	5	1 0	371	30.63	29.47	195	181
WOOLSTASTON	.. (The Rectory)	.. ..	5	1 5	800	36.00	31.13	206	200
WESTBURY	.. (Wallop)	.. ..	8	1 6	700	37.95	34.23	216	194
SHREWSBURY	.. (Abbey House)	.. ..	8	1 3	171	25.43	22.51	198	175
" ..	(Corporation Gauge)	.. ..	8	1 3	174	28.57	25.61	176	148
" ..	(Highfield)	.. ..	5	4 6	250	26.87	24.37	198	173
" ..	(Fitz Rectory)	.. ..	5	1 2	238	26.75	27.74	221	201
" ..	(Fitz Manor)	.. ..	5	1 4	253	26.51	27.16	205	187
" ..	(Roden)	.. ..	—	—	208	26.87	23.89	198	169
SHIFNAL	.. (Neachley)	.. ..	6	1 6	280	31.34	29.51	225	227
" ..	(Haughton Hall)	.. ..	5	3 0	355	28.60	28.95	201	182
NEWPORT	.. (Aston Hall)	.. ..	5	1 4	280	29.16	30.81	218	201
" ..	(Agricultural College)	.. ..	5	1 0	210	26.68	24.84	201	179
" ..	(Edgmond)	.. ..	8	1 0	261	28.64	28.22	221	212
MARKET DRAYTON	(Buntingdale)	.. ..	8	3 0	276	31.06	29.37	..	—
ELLESMORE	.. (The Grange)	.. ..	5	0 10	—	32.78	33.18	221	207
OSWESTRY	.. (The Mount Reservoir)	.. ..	5	1 0	698	35.54	40.59	213	212

Part II.

Abstracts, etc., of Annual Reports of the Medical Officers of Health for the Various Districts.

For the second time the reports for the districts forming the Atcham Combined District have (with the exception of Church Stretton Urban District) been issued as one report. The districts comprised in the report are Atcham, Church Stretton, Clun, Newport and Whitchurch Rural Districts ; Dawley, Newport, and Whitchurch Urban Districts, and the Boroughs of Bishop's Castle and Wenlock.

The reports on individual districts are preceded by remarks which are generally applicable. These deal with house to house inspection, the administrative control of phthisis, and include extracts from the Public Health Tuberculosis Regulations and the explanatory memorandum of the Local Government Board.

Dr. Gepp says :—“ The County of Salop has taken a most important step in the crusade against phthisis, in the formation of the “ Shropshire Association for the Prevention of Consumption and other forms of Tuberculosis.”

“ The Association has been inaugurated most successfully, and public interest has been thoroughly aroused. An influential General and Executive Committee has been appointed, and representative local committees are now being formed throughout the County to further the objects of the Association. These objects are firstly the erection and maintenance of a Sanatorium for the County, for the treatment of cases in the early stage, and for education of patients in the methods of treatment and of prevention of spread of infection, so that they may continue these methods in their homes. Other principal objects are to influence public bodies to use all preventive measures within their power against the infection of tuberculosis, and to educate the public in an accurate knowledge of the extent and the limitation of this infection. The chief duties of the local associations are to interest local people in the work of the Association and to raise subscriptions from all classes ; to aid in the selection of cases for sanatorium treatment, and to exercise a friendly supervision over patients after their return from the sanatorium.”

“ It is fully evident that for success in the crusade against consumption, active and mutual work by the County Association and the District Councils is essential. Each has scope and duties which supplement those of the other.”

“ At the present time the essential matter is for the Councils to adopt a system of voluntary notification in every District, so as to supplement the compulsory notification now in force with regard to poor-law cases ; to arrange with the Medical Officer of Health and the Sanitary Inspectors for the carrying out of the investigations, periodical visits, and measures of disinfection and prevention generally, laid down by the Tuberculosis Regulations, and the memorandum ; and to work in active co-operation with the County Association so as to secure the best results.”

ATCHAM (Rural).

<i>Medical Officer of Health</i>	..	..	<i>M. GEPP, L.R.C.P.E., D.P.H.</i>
<i>Area in Acres</i>	..	..	.. 125,207
<i>Population</i>	..	..	.. 20,895
<i>Number of inhabited houses</i>	..	..	.. 4,329
<i>Number of persons per house</i>	..	..	.. 4.8

Physical Features and General Character of the District.

“ The District is a very large one, some 22 miles in length by some 14 in extreme breadth, its area being 125,207 acres. The river Severn runs through it from north-west to south-west, dividing it into two parts, of which the Northern and smaller part is continuous with the Midland plain, on the new Red Sandstone. The general elevation of this part is from 200 to 300 feet O.D. The Southern and larger part is more elevated, rising gradually from the river, southward and westward, from 200 to some 600 feet O.D., with considerably greater elevations on the hillsides, forming the western and southern borders. The geological formation of this part is broken and diverse. The hills are the outliers of the Cambrian and Silurian ranges of Wales and Shropshire, and these formations project into the District. There are also detached but considerable exposures of the coal measures and of the Permian Red Sandstone. There is in both parts a variable, but generally considerable, thickness of drift overlying the strata. The drainage is, on both sides, to the Severn, by numerous small tributary streams. The Borough and County town of Shrewsbury lies nearly in the centre of the District.

“ The District is entirely rural in character, for the most part fertile and highly cultivated, and supporting a comparatively large agricultural population, distributed in numerous important villages, in smaller hamlets, and largely also in scattered isolated dwelling-houses. The density of population is equal to about 108 persons to the square mile. A few coal mines are worked around Hanwood, but many parts of the small coal-fields are abandoned. Extensive quarries of Quartzite Stone, for road metal, are worked at Pontesbury.”

Statistics.

The natural increase of population during the year was 95. The population is estimated at the middle of 1908 to be 20,790, and corrected for public institutions, 19,820.

Period.	Death-rates per 1,000 population from									Infant Death-rate per 1000 Births.	Birth-rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tuber- cular Diseases	Bron- chitis.	Pneu- monia.	Heart Diseases.	Cancer.		
1908	15.0	30	76	81	45	76	86	1.66	1.36	88	24.1
1898-1907	14.7	..	..	..	..	..	..	..	..	88	24.4

The zymotic death-rate was due to 5 deaths from diphtheria, and 1 from whooping cough.

Infectious Disease. Fifty-two cases of scarlet fever, 17 of diphtheria, 4 of enteric fever, 8 of erysipelas, and 1 of puerperal fever were notified. The cases of scarlet fever were mild and much scattered. Ten cases occurred amongst the children at the Workhouse in September. The cases of diphtheria were scattered and affected eleven parishes. Four out of the 5 fatal cases occurred in December, 2 being young adults in a farm in Hughley parish. One of the cases of enteric fever was imported, and the source of the other three was obscure.

Phthisis. Phthisis caused 16 deaths. Voluntary notification is in force and 13 notifications were received. This number is small, but it is anticipated that with the formation of a County Association, notification will be more frequent.

School Closure. Six schools were closed on account of influenza, 2 on account of measles, and 3 on account of whooping cough.

Hospital Isolation. There is no isolation hospital for the district, and Dr. Gepp says:—“There can be no doubt as to the desirability of the district having permanent and readily available isolation accommodation for the serious and acute outbreaks . . .” There is an arrangement for prompt despatch of a tent in case of small-pox, and the Council have a Berthon Hospital Hut and a small tent.

Disinfection. Rooms are sprayed with formalin or cyllin. The Council has a Thresh Emergency Steam Disinfector, but it is not used in routine disinfection. Dr. Gepp says:—“I have in recent reports pointed out that the only certain process available for the disinfection of bedding and clothing which is not washable would be found in the routine use of a steam disinfecter by the Council’s staff.”

Water Supply. There are public systems of supply in Meole Brace and Pontesbury village, and a supply is being provided for the village of Bayston Hill.

Private systems of supply from springs exist in Acton Burnell, Albrighton, Buildwas, Condover, Cound, Cressage, Eaton Constantine, Frodesley, Harley, Harnage, Pitchford, Ruckley, Rushton, Shrawardine, Uppington, and Upton Magna.

Elsewhere the supply is from pumps and wells, of which the Council maintains a considerable number as public supplies.

Meole Brace. The source of supply is from the top water pumped from a colliery shaft at Moat Hall, and supplemented by a spring-fed reservoir at Welbatch. Increased storage (100,000 gallons) has been provided, and improvements made so as to minimise the risk of contamination.

Pontesbury. The supply is piped from a spring to the houses. The yield has been good throughout the year. A public well is maintained for the supply of houses on Pontesbury Hill.

Bayston Hill. A spring of water has been acquired and a reservoir to yield 12,000 gallons constructed. The first portion of the main has been laid.

Montford. A piped supply to several cottages has been completed.

Cound Moor. A better supply to some scattered houses previously reported on is under consideration, but nothing so far has been done.

Cross Houses. There are 25 to 30 houses previously reported on without a proper supply. The question of supplying from the Workhouse is under consideration, but no action has been taken.

The Sanitary Surveyor is engaged in a systematic effort to improve the water supplies of the district by removing sources of pollution and reconstruction of the upper part of the wells. The following are instances of the work done :—*Hanwood*—Post Office well supplying 7 or 8 houses protected—Twelve houses in Factory Row have been supplied from a new well—the supply of 12 houses at Hanwood Bank is under consideration.

Ford. The school well water has been analysed and found to be contaminated and another supply advised. Analyses of two well waters in the village showed them to be unsafe. The public well is situated in a dip not far from the Churchyard, and the water may probably be endangered as burials increase in the new extension. There is a spring which could be utilised, and Dr. Gepp advises that a scheme should be prepared.

Sewerage, Drainage, and Excrement Disposal. Several of the larger villages are sewered, of which the chief are Meole, Pontesbury, Minsterley, Dorrington, Asterley, and Bayston Hill.

Meole Brace. The Surveyor is engaged in improving the treatment of the sewage at the out-fall works.

Pontesbury. The Surveyor's plans for sewerage and sewage disposal will shortly be completed.

With the exception of Meole Brace, where water closets are in general use, the system of excrement disposal is by earth closets and privies. During the last year 4 privies were converted into water-closets, and 61 into pail or earth-closets.

Scavenging. There is no system of scavenging in the District.

Housing. House accommodation is generally adequate in amount, and as a whole, in fair condition. There is “a large number of very old houses becoming worn out and needing frequent inspection and attention to keep them above the border line of unfitness.” Certificates were presented under sec. 30 of the Housing of the Working Classes Act, 1890, declaring 5 houses in Cressage village to be unfit for habitation. The Council however did not take action on account of the scarcity of houses, and the owner carried out some repairs. The Sanitary Inspector has begun a house to house inspection on Pontesbury Hill, where there are many very old, small, ill-ventilated, damp, and dilapidated houses. Remedial measures should be rigidly enforced wherever a house can be made fit for habitation, using the Nuisance Clauses of the Public Health Act, 1875, and where the owner fails to take action, proceedings under the Housing of the Working Classes Act, 1890, should be taken.

Permissive Powers. Sections 29, 30, and 31, of the Public Health Acts (Amendment) Act, 1890, applying to slaughter-houses, were adopted during the year.

Bye-laws are in force for private scavenging, in the whole district, and for nuisances, new streets and buildings, and slaughter-houses, in certain contributory places.

Slaughter-houses. There are 15 on the register—periodically inspected.

Dairies, Cowsheds, and Milkshops. The Model Regulations are in force. There are 145 cowkeepers and milk-sellers on the register. The inspectors continue to give much attention to the conditions in cowsheds. The establishment of a Creamery at Minsterley has resulted in a large increase in the number of milk sellers.

BISHOP'S CASTLE (Urban).

Medical Officer of Health ..	..	M. GEPP, L.R.C.P.E., D.P.H.
Area in Acres ..	..	1,867
Population	at 1901 Census	1,378
Number of inhabited houses ..	..	354
Number of persons per house ..	..	3.9

Physical Features and General Character.

"The Borough forms an area some three miles in length by a mean breadth of about one mile, lying within the south-west border of Shropshire, touching the Montgomeryshire border at one end, but otherwise surrounded by the Clun Rural District. It has the small town of Bishop's Castle about the centre. The elevation varies from about 500 feet O.D. in the valley at the south-east end to 1000 feet or more in the hill country forming the north-west end. The town lies on a hillside rising out of the valley, the main street rising steeply from about 600 feet to 700 feet O.D., and the houses are placed on either side of the street and about the crest of the hill above it. The subsoil is the Wenlock and Ludlow beds of upper Silurian age. The natural drainage is from north and west to south and east by small streams, the district lying upon the drainage system of the river Teme. In the town some small streamlets have been culverted about the foot of the hill, and are practically sewers. The town is a market town and Borough of great age, and the area outside is very sparsely populated."

Statistics.

The deaths exceeded the births by three. The population is estimated at the middle of 1908 to be 1,310, and corrected for public institutions, 1,290.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1908	20.1	·0	·77	2.32	·77	1.55	·0	1.55	1.55	100	23.2
Averages for years 1898-1907	18.3	..	..	..	..	..	..	..	..	65	25.2

There were no deaths from any of the common infectious diseases.

Phthisis caused 3 deaths.

Infectious Disease. Nine cases of scarlet fever, 1 of diphtheria, 3 of erysipelas, and 1 of puerperal fever were notified. All the cases of scarlet fever were in the autumn, and 8 of them were attending the elementary school. Apparently the disease was being spread by unsuspected cases amongst the children. The school was closed for three weeks and there was no fresh case. The case of diphtheria was imported.

Isolation Hospital. There is no hospital, but a cottage is secured in case of an emergency of small-pox. It should be made available at short notice.

Disinfection—by occupiers or owners. It is recommended that the Sanitary Inspector should be provided with a spraying apparatus. An emergency steam disinfecter has been provided.

Water Supply. The supply is upland surface water from uncultivated moorlands away from possibilities of contamination. In dry seasons there has been a shortness owing to leakage of reservoir. The Council has had a report from Engineers on this matter, but has not so far taken any action. The service was constant throughout the year.

Sewerage and Drainage. Plans have been adopted for improvement of the sewerage of the town and for treatment of the sewage. “The carrying into effect of this scheme will be a great public improvement, resulting in the removal of sources of offensive nuisance caused by the imperfect flow of sewage in the old stone culverts, and in the present flat irrigation channels. The new scheme will also benefit the public health by enabling better drainage of private property, and especially in providing means for the abolition of many of the defective and offensive old privies in the town, by conversion into water-closets.”

Excrement Disposal is principally by means of privies, many of which are defective and should be converted.

Scavenging is done by the householders, a “tip” being provided.

Housing. The town being very old, there are a good many cottages of old and poor construction which need repeated inspection and attention, but a good deal of improvement has taken place in recent years.

Permissive Powers. Infectious disease (Prevention) Act, 1890, and the Public Health Acts, (Amendment) Act, 1890, part III., are adopted, and part IV. of the Public Health Acts (Amendment) Act, 1907, sec. 52 to 68 (with the exception of sec. 59), is adopted and waiting official sanction. Bye-laws are in force with respect to nuisances, cleansing of footways, removal of house refuse, cleansing of earth closets, privies and asphits, slaughter-houses, common lodging-houses, and new streets and buildings.

Dairies, Cowsheds, and Milkshops. Regulations are in force. There are 7 cowkeepers on the register.

Slaughter-houses—three; *Common Lodging-houses*—two—are inspected regularly.

BRIDGNORTH (Urban).

<i>Medical Officer of Health</i>	..	..	J. C. PADWICK, M.R.C.S., L.R.C.P.
<i>Area in Acres</i>	..	..	3,018
<i>Population</i>	..	..	6,052
<i>Number of inhabited houses</i>	..	..	1,300
<i>Number of persons per house</i>	..	..	4.6

Statistics.

The natural increase of population during the year was 12. The population is estimated at the middle of 1908 to be 6,060.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth-rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases.	Cancer.		
1908	15.6	.33	.0	.99	.33	1.32	1.15	.99	.99	154	19.2
Averages for years 1898-1907	16.3	..	..	..	..	..	..	..	..	116	23.3

The zymotic death-rate was due to 1 death from enteric fever and 1 from diarrhoea.

Infectious Disease. Thirty-seven cases of scarlet fever, 9 of diphtheria, 3 of enteric fever, and 2 of phthisis were notified. Forty-four of these cases were nursed in the Isolation Hospital. Most of the scarlet fever occurred in September and October. Four of the diphtheria cases were in one family and were accounted for by a disused defective drain.

Sewage Disposal. The treatment of the sewage that is discharged untreated into the river Severn is under consideration. The North Gate Sewage Works continue satisfactory, and the beds are being filled with new material.

Sanitation. Portable receptacles for refuse are advised for all houses. These receptacles are emptied weekly by the Corporation.

Water Supply. The drinking water from Oldbury Wells continues to be good and plentiful. Filtration of the river water by Candy's filters is decided upon and will be accomplished during the present year.

Milk Supply. "I have inspected the dairies and cowsheds, and find them in a satisfactory sanitary condition. In some of the cowsheds the air space is not sufficient for the number of cows inhabiting them, and this condition will have to be rectified, or proceedings must be taken to enforce the Regulations recently required by the Local Government Board."

"The Factories, Workshops, Bakehouses and Slaughter-houses have also been inspected, and are in good order."

BRIDGNORTH (Rural).

<i>Medical Officer of Health</i>	...	...	J. C. PADWICK, M.R.C.S., L.R.C.P.
<i>Area in Acres</i>	...	...	70,521
<i>Population</i>	<i>at 1901 Census</i>		8,573
<i>Number of inhabited houses</i>	„	..	1,886
<i>Number of persons per house</i>	„	..	4.5

Statistics.

The natural increase of population during the year was 85. The population is estimated at the middle of 1908 to be 8,600.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1908	15.4	.35	.0	.70	.12	.58	.81	1.86	.93	75	23.1
Averages for years 1898-1907	13.5	..	..	..	..	..	..	..	..	96	25.7

Infectious Disease. Eleven cases of scarlet fever, 5 of diphtheria, and 1 of erysipelas were notified. Measles was epidemic in Chelmarsh, Ditton Priors, and Cleobury North districts.

Seven schools were closed on account of measles, 2 on account of whooping cough, and 1 on account of mumps.

Infantile Mortality. Of the 15 deaths of infants under 1 year of age, 9 were due to premature birth.

Water Supply. The water supply has been plentiful.

House Accommodation. Two cases of overcrowding were dealt with.

Dairies and Cowsheds have been inspected and found satisfactory. There are 18 persons registered under the Order.

The Factories, Workshops, and Schools have been inspected and found satisfactory.

BURFORD (Rural).

Medical Officer of Health A. E. WHITE, M.B., D.P.H.

Area in Acres .. .. .. .. .. .. ..	.. .. .. .. .. .. ..	7,798
Population at 1901 Census .. .. .. ..	.. .. .. .. ..	1,233
Number of inhabited houses .. .. .. .. .. .. ..	.. .. .. .. .. .. ..	263
Number of persons per house .. .. .. .. .. .. ..	.. .. .. .. .. .. ..	4.7

General Character of the District.

" The District lies on the Southern slopes of the Clee Hill and for the most part two hundred to eight hundred feet above the sea level.

" It is entirely agricultural and nowhere approaches an urban character.

" There is a Cottage Hospital on the southern border of the district.

" The Workhouse is situated in Tenbury."

Statistics.

The natural increase of population during the year was 2. The population is estimated at the middle of 1908 to be 1,233.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1908	15.4	.81	.0	.0	.0	.81	.0	4.87	2.43	192	21.0

The zymotic death-rate was due to 1 death from diarrhoea.

Infantile Mortality. This high mortality was due to 2 deaths from premature birth, 2 from diarrhoeal diseases, and 1 from bronchitis.

Infectious Disease. One case of scarlet fever and 7 of diphtheria were reported. There was considerable evidence that diphtheria was imported by hop-pickers, and Dr. White states:—
" These cases of infection introduced into the district by hop-pickers are of frequent occurrence, and it would be well to consider if measures could not be taken to avoid this. It seems to me that the system of closing the schools for the hop gathering is not without serious objection. I should like to see bye-laws for hop-pickers adopted in the district, and one should certainly be that foreign pickers and residents should not be employed together in this work."

Housing Accommodation is good, and no cases of overcrowding were reported.

Drainage and Scavenage are matters for each householder and usually cause no nuisance.

Water Supply—some of the wells still not satisfactory—action taken in two cases.

Bakchouses—two in number—have been inspected.

Dairies and Cowsheds—two in number—in good condition.

CHIRBURY (Rural).

<i>Medical Officer of Health</i> ..	..	J. R. WOODS, B.A., M.R.C.S., L.R.C.P.
<i>Area in Acres</i> ..	..	27,045
<i>Population</i> ..	<i>at 1901 Census</i>	3,539
<i>Number of inhabited houses</i> ..	..	812
<i>Number of persons per house</i> ..	..	4.3

Statistics.

The natural increase of population during the year was 26. The population is estimated at the middle of 1908 to be 3,540.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1908	15.5	.0	.0	1.41	.0	1.13	.56	2.82	1.13	39	21.4

There were no deaths from any of the common infectious diseases.

Phthisis caused 5 deaths during the year. Dr. Wood says that a sanatorium for the County should prove of inestimable benefit to the community.

Infectious Disease. Only 1 case of scarlet fever was notified.

Housing Conditions. The house to house inspection is nearing completion and has been an excellent piece of work. Many houses have been attended to on account of damp, and otherwise improved. No serious case of overcrowding has been brought to my notice.

Drainage, Sewage, and Refuse Disposal. There are many matters with regard to drainage and sewage disposal and emptying of closets that require attention. The substitution, wherever possible, of the pan closet for the old privies is advocated.

Workshops and Slaughter-houses. The workshops are very satisfactory as regards ventilation, etc. Attention is called to a very imperfectly drained slaughter-house.

Dairies and Cowsheds. The dairies are well kept and ventilated. Freer ventilation and more frequent lime-washing of the cowsheds is advised.

Water Supply. This matter is at present receiving careful attention. Dr. Wood hopes to be able to report next year that some solution of the difficulty has been arrived at.

CHURCH STRETTON (Urban).

<i>Medical Officer of Health</i>	..	..	M. GEPP, L.R.C.P.E., D.P.H.
<i>Area in Acres</i>	..	..	982
<i>Population</i>	at 1901 Census	..	816
<i>Number of inhabited houses</i>	„	..	147
<i>Number of persons per house</i>	„	..	5.5

Physical Features and General Character of the District.

“ The district comprises the small ancient town of Church Stretton, lying in an open valley running nearly North and South 600 feet above sea level, together with the lower slopes of the bold hills which form the sides of this valley, and which rise to some 1,600 feet O.D. The area is 982 acres. The subsoil of the valley is glacial drift, generally of dry and well drained gravel, the hillsides to the West being of hard Long-myndian rock strata, of Pre-Cambrian age, those to the East being also of hard rock, of Ordovician age. The town lies on a Watershed, the natural drainage of the valley being on the North towards the Severn, and on the South towards the Teme, the fall being gentle in either direction. The situation is one of great natural beauty and healthfulness, and in consequence the number of residents and visitors has for some years been increasing. The Urban District was constituted in 1899.

“ The area of development and of new building has been rapidly extending, and the character of the place has been changed into that of a modern residential district, and a health and holiday resort of high class, for which its open elevated situation and beauty of surroundings well fit it.

“ Climate, soil, aspect, and natural drainage are favourable to a high standard of health such as it certainly enjoys. The Council has since its formation been active in promoting and encouraging the progress of the district on sound sanitary lines. The Urban District has a plentiful supply of soft and excellent upland water, laid on to every house.

“ An admirable and extensive scheme of sewerage has been carried out, with the result that the town is thoroughly well drained.

“ The development of building and laying out of new streets has been well regulated under a very complete and carefully considered series of by-laws. A public system of removal of house refuse has been adopted, and the Council is prepared through its Surveyor to test the drainage of any house and to issue to the householder a certificate of sanitary efficiency where the drains pass the test.

“ This is designed to encourage householders to keep their drains and sanitary arrangements up to a high standard, and as an assurance to visitors to houses in the district, where the certificate is obtained and exhibited.”

Statistics.

The natural increase of population during the year was 7. The population is estimated at the middle of 1908 to be 1,400, and corrected for Public Institutions 1,370.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases.	Cancer.		
1908	5.1	·0	·0	·0	·0	1·46	·73	1·46	·0	105	14·0
Averages for years 1900-1907	14·3	..	..	..	..	..	..	..	..	105	19·0

There were no deaths from the common infectious diseases.

Infectious Disease. No case of infectious disease was notified. The Council has favourably considered the suggestion of the Shropshire Nursing Federation for the supply temporarily, during an epidemic of measles or whooping cough of a nurse for visiting and giving advice for better isolation in an infected house.

Tuberculosis. There were no deaths from phthisis during the year. Under the Public Health (Tuberculosis) Regulations, 1908, all cases of consumption in poor law practice have to be notified, and the Council is empowered to take steps for the prevention of the spread of infection, and should authorise the Sanitary Inspector to carry out the disinfection, to supply disinfectants, and to distribute leaflets containing advice. Voluntary notification of phthisis is recommended for the Council's consideration.

Isolation Accommodation. A site for a hospital is under consideration, and to solve the difficult question of water supply it is suggested that the Water Company's water should be brought to the nearest point and pumped.

Disinfection. There is no steam disinfecter, and Dr. Gepp suggests that the Urban and Rural District Councils might combine for the purpose of providing one. "Disinfection by steam is the only certain method for articles of clothing, etc., which cannot be boiled or washed."

Water Supply. "The District has an ample supply of very soft upland surface water from the Works of the Church Stretton Water Company. The main reservoir holding 12,000,000 gallons is in New Pool Hollow at a height of about 1,000 feet, and there is a small reservoir in Town Brook Hollow at a height of 800 feet. The small reservoir is principally fed from the larger one. Filtration of the Town Brook Valley water is advocated, or as an alternative it is suggested that the Town Brook Stream might be diverted and the small reservoir fed entirely from the larger.

Sewerage and Drainage. The sewerage scheme was completed in the year 1906 and has proved efficient in providing satisfactory drainage. The sewers are provided with manholes for flushing, and three automatic flushing tanks. Manhole covers are mostly closed in the streets and open in open places. Eleven tall shaft ventilators are provided at the dead ends and other points.

The disposal of the sewage is by septic tank, contact beds, storm water filters, and land filtration. The prevention of leakage of subsoil water into the sewers is engaging the attention of the Council. The new drains are laid in accordance with the Building Bye-laws, and the Drainage Regulations. A good deal of improvement is desirable with respect to drainage of old property.

Excrement Disposal is by water closets numbering 430, earth closets 8, and old privies 44. The privies in the town itself should be converted whenever found defective.

House Refuse. There is a weekly collection. Portable ashbins are strongly recommended.

House Accommodation. There are a few old and worn out cottages in the centre of the town, otherwise all of new construction.

Permissive Powers. The adoption of the Infectious Disease (Prevention) Act, 1890, Public Health Acts (Amendment) Act, 1890, and the Public Health (Amendment) Act, 1907, and also Bye-laws as to nuisances have been recommended and are under consideration.

Slaughter-houses—two on the register—inspected periodically.

Dairies and Cowsheds. There are two cowkeepers on the register. The registration of all persons selling milk in the district should be enforced.

Bakehouses. There are 5 in the town, and they have been inspected. Some defects were found and have received proper attention.

CHURCH STRETTON (Rural).

<i>Medical Officer of Health</i>	..	..	M.	GEPP, L.R.C.P.E., D.P.H.
<i>Area in Acres</i>	..	..	..	.. 45,103
<i>Population</i>		<i>at 1901 Census</i>	..	.. 4,479
<i>Number of inhabited houses</i>	,,	..	..	.. 1,005
<i>Number of persons per house</i>	,,	..	..	.. 4.4

Physical Features and General Character.

“ The District is one of hills and dales, highest across the centre from west to east, forming the watershed between the Severn and Teme river systems, and sloping gently to north and south. The natural drainage is by various small streams rising in the uplands, and affording good natural drainage towards the Severn on the north, or the Teme on the south side of the watershed. Three parallel ranges of hills run through the district from south-west to north-east, the “ Longmynd ” range, of Arealian age, along the western side ; the steep escarpment of “ Wenlock Edge ” of Silurian age, along the eastern border ; while between lies a tract of Ordovician age, through which the Caradoc and Hope Bowdler range of hills rise. The elevation varies from 1,700 feet at the summit of the Longmynd moorland, to some 400 feet at the northern and southern limits of the District. The hillsides are largely cultivated, but in the higher parts are uninhabited moorland. Between the ranges are fertile valleys with several villages and many isolated farms and cottages.”

"The District is entirely rural and agricultural. In the centre lies the small Urban District of Church Stretton. There is an unimportant exposure of coal measures at the north end of the District. These measures are not now worked."

Statistics.

The natural increase of population during the year was 36. The population is estimated at the middle of 1908 to be 4,410, and corrected for public institutions, 4,440.

The birth-rate was below that of any of the preceding ten years. The zymotic death-rate was due to 2 deaths from whooping cough.

Infantile Mortality. There has been no infant death during the last three years from diarrhoeal diseases or tuberculosis.

Infectious Disease. Ten cases of scarlet fever, 6 of diphtheria, and 1 of enteric fever were notified. Several of the cases of *Scarlet Fever* were connected with a school outside the district. On investigation of one outbreak, 4 unrecognised cases were discovered. *Diphtheria*—Three of the cases were in Smethcote parish, and in consequence bacteriological investigation was made by the Local Education Authority but without result—no further cases occurred. The case of *Enteric Fever* was of obscure origin. *Measles* affected Wistanstow and Acton Scott, both of which schools were closed. Wistanstow, Rushbury, and Cardington schools were closed on account of *Whooping Cough*.

Phthisis. Six deaths occurred during the year. Voluntary notification is in force—no notifications were received.

Hospital Isolation. There is no hospital. In the event of the Urban District Council providing a hospital, an arrangement with that Council is suggested.

Disinfection. The Sanitary Inspector disinfects rooms by spraying. There is no steam disinfecter, and the advisability of joining with the Urban District for the provision of one, is pointed out.

Water Supply. There is no public supply in the district, but private supplies are laid on to Leebotwood, Plaish, Shipton, Wistanstow, Woolstaston, and to Woolstone hamlet.

The Church Stretton Water Co.'s water has been laid on to Little Stretton, and a similar extension is advocated with regard to All Stretton.

Picklescott. After much preliminary work, a scheme of supply has been adopted.

Marshbrook. A suggestion is made that a well yielding good water should be connected to a pump on the roadside, but no action has so far been taken. The pump-well mostly used does not yield a safe water.

Brockton. A scheme is now under consideration for supplying the village from a spring close to the brook.

Easthope. The improvement of a supply to six cottages has been determined on by the owner, but not yet carried out.

Hungerford. An extension of a spring supply to 8 houses has been suggested. This will be a great improvement.

Bushmoor Common, The Corner, and Leemore Common are amongst the worst parts of the district for water. At *Bushmoor* two new wells have been made. The Surveyor has submitted a scheme for piping a spring to the roadside, but no action has yet been taken. This spring should be properly protected. At *The Corner* the 'Spout' supply should be improved, and a new well at the South end of the Common needs better construction.

At *Eyton-under-Heywood* the school well has been cleaned out and sources of pollution removed.

Drainage and Excrement Disposal. There are short lengths of public sewers and combined drains in several of the villages discharging on to land or into running streams. There is no change in the disposal of sewage at All Stretton previously reported upon.

Practically all the cottages have privies of old type and construction. Their abolition should be insisted upon wherever they are a nuisance on account of situation or defective construction.

Housing. The cottages are mostly of considerable age and often undesirably small. The Sanitary Inspector has made a house to house inspection of almost the whole of the district, and he reports that there are a few obvious nuisances in the surroundings of houses.

Dairies, Cowsheds, and Milkshops. Regulations have been recommended but not adopted. The Council are advised to insist upon the requirements of the Dairies and Cowsheds Order of 1885 with regard to cleansing, drainage, lighting and ventilation. There are 26 cowkeepers and milk sellers on the register. Eighty-four visits were paid.

CLEOBURY MORTIMER (Rural).

Medical Officer of Health A. E. WHITE, M.B., D.P.H.

<i>Area in Acres</i>	..	..	..	..	..	..	..	44,338
<i>Population</i>		<i>as 1901 Census</i>		..	..	..	..	6,720
<i>Number of inhabited houses</i>		..	..	..	..	..	..	1,292
<i>Number of persons per house</i>		..	..	..	..	..	..	5.2

General Character of the District.

"The population is thinly scattered over the district, only the small town of Cleobury Mortimer really approaching urban character, though the mining village of Highley in the north is progressing towards that condition.

“ The district is strictly rural and almost entirely agricultural, there are a few coal pits and quarries.
“ The Workhouse is at Cleobury.

"The Infectious Diseases (Prevention) Act and parts of the 1890 Amendment Public Health Act are in force, together with byc-laws relating to new buildings, slaughter-houses and nuisances."

Statistics.

The natural increase of the population during the year was 93. The population is estimated at the middle of 1908 to be 6,550.

The zymotic death-rate was due to 2 deaths from measles and 3 from diphtheria.

The high birth-rate was due entirely to the large number of births in Highley.

Phthisis caused 14 deaths, and there were 6 deaths from other tuberculous diseases. Dr. White states that the Council should make a strong endeavour to reduce these figures, by forming a branch of the Shropshire Association for the Prevention of Consumption, by voluntary notification, by disinfection after death, by the issue of leaflets, and by closing insanitary houses.

Infectious Disease. Fourteen cases of diphtheria, 16 of scarlet fever, 1 of enteric fever, and 10 erysipelas were notified.

Eight cases of diphtheria occurred at Cleobury Mortimer, and it is stated that they were the indirect results of the want of proper scavenging and drainage of the town. Four cases occurred in connection with Clee Hill School, which was closed in consequence.

Ten cases of scarlet fever occurred at Hopton in connection with the school, and 6 cases in connection with Clee Hill School.

Farlow, Coreley, and Hopton Wafers Schools were closed in consequence of the prevalence of measles.

House Accommodation. There is a distinct need for more houses on the Clee Hill, and at least a dozen houses should be closed or efficiently repaired. "Several of these are structurally dangerous, they have to be propped by the occupiers to keep them up, others are not rain proof, and they are all without proper drainage and water supply."

Water Supply. "Some few houses have been connected to the main at Cleobury Mortimer, but many more still remain that use wells, which are liable to pollution, or have to carry water from the public well more than a reasonable distance. A list of these have been before the Council."

"Several private supplies have been improved, and at Highley a better distribution of the standpipes has been promised."

Drainage and Scavenging. "There is little to complain of in the country districts, but at Cleobury the scavenging might be undertaken by the Council with advantage. A closer supervision of the laying of new drains would save much trouble later."

Factories and Workshops Act. There is little to be done under this Act.

Cowsheds and Dairies—ten on register—are being improved.

Slaughter-houses are kept clean and satisfactory.

The Common Lodging House has many defects and only part of these have been remedied.

CLUN (Rural.)

Medical Officer of Health M. GEPP, L.R.C.P.E., D.P.H.

<i>Area in Acres</i>	..	..	..	..	..	..	..	82,206
<i>Population</i>		<i>at 1901 Census</i>						6,824
<i>Number of inhabited houses</i>		„		..	..	..	..	1,487
<i>Number of persons per house</i>		„		..	..	..	..	4.6

Physical Features and General Character.

“ The Rural District is essentially a hill country, lying in the south-west of the county, and on the borders of Wales. Much of the District lies at an elevation of 1000 feet and upwards, especially in the northern and western parts. The centre and south-eastern part consists of open valleys, at an elevation above Ordnance Datum of 400 to 600 feet, and broken and divided by small groups of hills. The main structure is that of an old elevated table-land much dissected, weathered down, and glaciated.

“ The geological formation is much broken, the upper and lower Silurian, and Ordovician measures being exposed in considerable areas, with less extensive exposures of the old red sandstone, and of Cambrian and Pre-Cambrian measures. The natural drainage is by various streams rising in the hill country to north and west, and forming the small rivers Onny and Clun, which leave the District through the valleys of the south and east to join the Teme river.

“ The District contains 16 parishes, and is sparsely populated, and agricultural in character, much of the hill country being cultivated or grazed. A small area in the north was in the past worked for lead, barytes, and other minerals, but these industries have much declined in recent years. The District contains the small market town of Clun in the south, and has several villages of small size which are principally placed in the valleys, and some smaller hamlets, and many isolated farmsteads scattered about the valleys and hillsides. The Borough of Bishop's Castle is within, and near the centre of, the District.”

Statistics.

The natural increase of population during the year was 54. The population is estimated at the middle of 1908 to be 6,600, and corrected for public institutions, 6,620.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth-rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1908	14.4	·15	·76	·45	·15	·76	·91	2·87	·60	78	21·3
Averages for years 1898—1907	15·1	..	..	..	..	..	..	..	..	95	25·0

The number of births was considerably lower than in any of the preceding ten years.

The zymotic death-rate was due to 1 death from measles.

Infectious Disease. Three cases of scarlet fever, 7 of diphtheria, 1 of enteric fever, 1 of puerperal fever, and 3 of erysipelas were notified. The infection in the case of enteric fever was imported. Measles was prevalent in the early part of the year and four schools were closed. One school was closed on account of whooping cough.

Phthisis. Three deaths were due to phthisis. Voluntary notification has been adopted and six cases were notified. Where considered advisable the Nuisance Inspector visited and saw that all precautions were carried out.

Hospital Isolation. There is no isolation hospital in the district, but there is an arrangement for the use of an unoccupied cottage for small-pox, in the Bishop's Castle Division.

Disinfection. The Sanitary Inspector disinfects by means of spraying. An emergency steam disinfecter has been bought for the use of this district along with Bishop's Castle.

Water Supply. There are public supplies in Clun town, and in Newcastle, from upland springs; and public pumps have been provided at Chapel Lawn, and Cefn Einion. There are combined supplies at Lydbury North, Acton, and Lydbury Down, and small supplies for a few houses in Linley parish (Linley School), Norbury, and Little Brampton. Elsewhere the supply is from springs and wells, often at considerable distances. Supplies have been recommended for Clungunford, Clunbury, and Clunton.

CLUNGUNFORD.—The Council has practically decided to purchase water from the principal landowner, and lay mains for supplying the remainder of the village.

CLUNBURY AND CLUNTON.—The springs have been gauged and schemes are in preparation.

BROCKTON.—The Surveyor is now making arrangements for a trial sinking in the Mill Meadow.

CLUN.—The work on the storage reservoir to prevent leakage has proved very satisfactory.

CHAPEL LAWN.—The well has been further protected against surface contamination.

NORBURY.—The dip-well has been protected, covered over, and a pump erected.

HOPTON HEATH.—The well has been protected and covered.

WENTNOR.—The Clody well has been protected.

Sewerage, Drainage, and Excrement Disposal. Clun town is for the most part sewered, and the sewage discharges into the river Clun. The disposal of the sewage has been under consideration and a report received from Engineers.

Excrement Disposal is mostly by privies with underground vaults. The abolition of privies discharging direct into water-courses is recommended. A public tip is provided at Clun for house refuse.

Housing. The housing conditions are on the whole very fair, although there are many old houses requiring constant attention. Particular attention should be paid to dampness caused by houses being imbedded on one or more sides in earth or by defective conditions of eaves-troughing and spouting.

Dairies, Cowsheds, and Milkshops. There are 5 cowkeepers and milksellers on the register. Regulations have been adopted.

Bakchouses—seven on the register—in good condition.

DAWLEY (Urban).

Medical Officer of Health M. GEPP, L.R.C.P.E., D.P.H.

<i>Area in Acres</i>	..	..	..	..	..	..	..	..	2,790
<i>Population</i>			<i>at 1901 Census</i>		..	..	..	..	7,522
<i>Number of inhabited houses</i>		..		..	..	..	..	..	1,633
<i>Number of persons per house</i>		..		..	..	..	..	..	4.6

Physical Features and General Character of the District.

“ The District lies at a considerable elevation upon the Shropshire Coalfield and table-land, of which it forms one of the higher parts. Its surface falls irregularly from north and north-west to south and south-east, and from 670 feet O.D. to some 400 feet O.D. roughly. The surface drainage is good owing to the steep fall of this part of the northern watershed of the Severn. The geological formation is the Carboniferous, the District being for the most part upon the coal measures, but with small exposures of the Millstone Grit in the south-western part.

“ As regards its general character, it may be described as a Coal and Iron Mining and Iron-working district largely worked out. Coal Mines long out of work and dismantled Ironworks are common features. At the present time it is chiefly the place of residence of an industrial community, many of whose members work in one or two large modern Engineering or Pottery works within the District, while large numbers work in Mines, Ironworks, and Brick and Tile works outside the District.

“ For an Urban community it is very scattered in character. There is a compact business centre, with some continuous lengths of houses radiating for some distance from it along the main road. The rest of the District is practically rural in character, with houses isolated or in groups of more or less number.

“ The District is naturally very healthy, being high, dry, and wind swept, and surface drainage being “ good.”

Statistics.

The natural increase of population during the year was 114. The population is estimated at the middle of 1908 to be 7,670, and corrected for public institutions, 7,700.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth-rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1908	16.0	1.56	.26	.65	.39	2.78	1.17	1.95	.91	147	30.0
Averages for years 1898-1907	15.5	..	..	..	..	..	..	..	..	107	31.5

The zymotic death-rate was due to 9 deaths from measles, 1 from whooping cough, 1 from diphtheria, and 1 from diarrhoea.

Infant Mortality was raised by an epidemic prevalence of measles, 3 deaths being due to this cause and 10 being due to bronchitis. These deaths must be considered as to some extent preventable if due care were taken in nursing cases of measles.

Infectious Disease. Six cases of diphtheria, 1 of erysipelas, and 1 of puerperal fever were notified. The Council has decided to supply antitoxin in necessitous cases, and to pay for protective inoculation. Measles accounted for 9 deaths, and there were also 11 deaths from bronchitis and 7 from pneumonia in children under 5 years of age. These diseases are very liable to follow on measles and whooping cough. Dr. Gepp makes a recommendation in favour of accepting the offer of the Nursing Federation to supply a nurse to deal with epidemics of measles and whooping cough.

Isolation Hospital. There is a joint small-pox hospital with the Rural District of Shifnal, but no accommodation for the other infectious diseases.

Disinfection of rooms is attended to by the Sanitary Inspector. The question of the provision of a steam disinfecter is under consideration, but no steps have yet been taken.

Water Supply. A scheme of water supply is almost complete. Dr. Gepp states:—“The source of supply is from the Harrington deep-well of the Madeley and Broseley Water Authority of the Borough of Wenlock. The loan sanctioned is £14,000. The water will be delivered from the Madeley reservoir by meter, the supply not to exceed 100,000 gallons per diem, at a cost of 6d. per 1,000 for 50,000 gallons, and 5d. per 1,000 for any quantity in excess. The scheme is designed to afford a supply for a population of 10,000 at 10 gallons per head, the supply being laid on to standpipes throughout the district.”

A gravitation main will deliver the water from the Madeley reservoir to the Council’s pumping station to be erected at the southern and lower part of the District. The pumping plant will be capable of raising 100,000 gallons in 10 hours to the reservoirs at the northern and higher part of the district. There will be two reservoirs. The larger and lower will hold 175,000 gallons for the general supply of the District, while a high level small reservoir to hold 25,000 gallons will serve to supply the highest parts round Dawley Bank. A few houses will be supplied from the gravitation main, and branch supply mains will be taken off the rising main. Combined standposts and fire hydrants will be used.”

Sewerage and Drainage. The sewers are more or less fragmentary, following the old road water drains. Many of the old sewers are rough culverts with large catchpits. They are gradually being improved by the Council from year to year. The outfall of the main sewers is mostly through channels and watercourses into the Severn. Sewers depend upon rainfall for flushing and untrapped road gullies for ventilation. Work has been carried out at Finger Road; Meadow Road; High Street, Dawley; Park Road, Old Park; Little Eytoun; and Forge Row, Old Park. Closing the surface gullies and proper ventilation of the sewers will become more and more imperative with increase of water-closets following on the water supply.

Excrement Disposal and Scavenging. Excrement disposal is principally by privies with underground vaults.

The modified system of public scavenging appears to work successfully.

Housing. The majority of houses are small and for the most part of old construction. Continued attention should be given to remedial causes of dampness and to making windows open freely.

Permissive Powers. Part III. of the Public Health Acts (Amendment) Act, 1890, was adopted in 1902. By-laws are in force with regard to Nuisances, New Buildings (Model Code for Rural Districts), and Slaughter-houses.

Dairies, Cowsheds, and Milkshops Regulations were made in 1904. There are 24 dairies on the register—periodical inspections are paid.

Slaughter-houses. There are 10 on the register—regularly inspected and kept in fair condition.

Bake-houses. There are 14 on the register—kept in fair condition.
construction.

DRAYTON (Rural).

<i>Medical Officer of Health</i>	..	..	A. MACQUEEN, M.D.
<i>Area in Acres</i>	..	..	51,384
<i>Population</i>	..	..	11,708
<i>Number of inhabited houses</i>	..	..	2,655
<i>Number of persons per house</i>	..	..	4.4

Physical Features and General Characteristics.

“ The Rural Sanitary District of Drayton comprises an area of upwards of 51,000 acres, situated in the great central plain of England. The general elevation of the district is about 300 feet. The district extends from the parishes of Adderley and Norton-in-Hales on the North, to the parish of Woore on the North-East, where the three Counties, Cheshire, Staffordshire, and Shropshire join; to the South, as far as and including the parishes of Hinstock and Child’s Ereall, and the villages of Eaton and Little Bolas in Stoke parish. On the East it is bounded by the river Tern and the parish of Chewardine. On the West it extends to and includes the village of Stoke-upon-Tern, the parish and village of Hodnet, and the hamlet of Marchamley. Near the centre of the district is the town of Market Drayton with the township of Little Drayton adjoining, and the parish of Moreton Say. The formation throughout is the new red sandstone, which attains its greatest elevation in England, in the Hawkstone Hills, near the western limit of the district. The river Tern in its winding course to the Severn drains the greater portion of the district. The land in general contour is level, well watered, highly cultivated, and there are some finely timbered estates. The population is chiefly employed in agricultural pursuits.”

Statistics.

The natural increase of population during the year was 113. The population is estimated at the middle of 1908 to be 11,532.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth-rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1908	14.4	.61	.09	1.04	.61	.95	1.13	2.43	1.21	85	24.2
Averages for years 1898—1907.	..	..	..	..	..	..	..	..	..	118	24.9

The zymotic death-rate was due to 1 death from whooping cough, 4 from diphtheria, and 2 from diarrhœa.

Consumption and other tuberculous diseases accounted for 19 deaths.

Infectious Disease. Thirteen cases of diphtheria, 6 of scarlet fever, 2 of erysipelas, 1 of enteric fever, and 1 of small-pox were notified.

Measles was prevalent in various parts of district and Moreton Say, Hodnet, Adderley, Stoke, and Market Drayton (Infants') Schools were closed in consequence.

“ Consumption has been voluntarily notifiable since 1900. Very few cases have been notified. The existence of the disease therefore only comes to my knowledge in case of death. Notice is then sent to the representatives, of the disinfection necessary to be carried out.”

Isolation Hospital and Disinfecter. The case of small-pox was removed to the Joint Hospital at Prees Heath, and 8 patients were removed to the Isolation Hospital at Little Drayton. At this latter hospital there is a steam disinfecter for clothing, etc.

Housing Accommodation for the Working Classes is ample and satisfactory.

Lodging-houses, Bake-houses, and Slaughter-houses are regularly inspected.

Regulations under the Dairies, Cowsheds, and Milkshops' Order (1886) are now in force.

Scavenging. Occupiers are responsible. Bye-laws are in force.

Disposal of Excrement. In Market Drayton and Little Drayton the water-carriage system is becoming general.

Sewerage and Drainage. The Little Drayton sewage disposal is satisfactory. A revised scheme for the treatment of Market Drayton sewage is under consideration.

Water Supply. The Market Drayton supply has been extended to Betton. Cheswardine has a public supply, “ but in the other villages of the district the water supply, being mostly derived from pump-wells, often faulty in construction and in bad situations, offers much room for improvement in quality, and sometimes in quantity.”

ELLESMORE (Urban).

Medical Officer of Health **A. H. HOFFMAN. M.D.**

<i>Area in Acres</i>	..	..	..	..	..	..	..	..	1,204
<i>Population</i>			<i>at 1901 Census</i>		..	..	..	..	1,945
<i>Number of inhabited houses</i>			„		..	..	..	..	425
<i>Number of persons per house</i>			„		..	..	..	..	4.5

General Character of the District.

“ The houses are mostly well built and the side walks are paved.

“ There are no manufactories of importance, the trade of the town being chiefly agricultural.

“ The water supply is excellent, being obtained from the Liverpool main as it passes the town.

“ The town is also sewered, Sanitary inspection is carefully carried out by your Inspector, and there is little or nothing affecting the health of the community calling for special mention.”

Statistics.

The deaths exceeded the births by 12. The population is estimated at the middle of 1908 to be 2,010.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1908	20.8	.0	.0	1.49	.0	.50	.99	1.99	1.99	139	21.3
Averages for years 1901-1907	14.3	..	..	..	..	..	..	..	..	90	24.7

There were no deaths from the common infectious diseases.

Phthisis caused 3 deaths.

Infectious Disease. Eighteen cases of disease were notified, all being diphtheria.

House Accommodation is good and no cases of overcrowding were found.

Drainage and Scavenging. “ The town is well sewered and the technical breach of the Rivers Pollution Act that has occurred is still under the consideration of your Council. The town is well scavenged.”

Water Supply is from the Liverpool main and is connected to most of the houses.

Workshops. A register is kept and regular inspections carried out.

Slaughter-houses, Bakehouses, and Dairies are receiving attention.

ELLESMORE (Rural).

Medical Officer of Health A. H. HOFFMAN, M.D.

Area in Acres	51,117
Population at 1901 Census	7,911
Number of inhabited houses	1,658
Number of persons per house	4.7

General Character of the District.

“ The district is purely agricultural and the houses are more or less widely distributed.

“ There are a few small villages, of which Baschurch is the largest. Some portions of the district are flat, but most of it is undulating and cultivated.

“ The subsoil is gravel with some clay and drift.”

Statistics.

The natural increase of population during the year was 83. The population is estimated at the middle of 1908 to be 7,913.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1908	14.7	.38	.00	.76	.38	1.90	.51	2.27	.88	105	22.8
Averages for years 1901—1907	13.6	..	..	..	..	..	..	..	..	89	24.1

The zymotic death-rate was due to 2 deaths from measles, and 1 from whooping cough.

There were 6 deaths from phthisis, and 3 from other tuberculous diseases. Dr. Hoffman states “ Notification of phthisis has been made compulsory for all cases under the Poor Law, and I hope this will soon be extended to all classes.”

Infantile Mortality. Of the 19 deaths under 1 year of age, 5 were due to enteritis. “ This disease is the most preventable cause of infantile mortality as it is usually due to improper feeding or want of cleanliness with regard to the feeding utensils.”

Infectious Diseases. Twenty-three cases of diphtheria, 3 cases of scarlet fever, and 1 case of enteric fever were notified.

House Accommodation. This is on the whole satisfactory, and no case of over-crowding occurred.

Drainage and Scavenage. Nearly all the houses have sufficient ground for the disposal of slop water and privy contents.

Water Supply—mostly derived from wells. Cockshutt has an excellent supply, and many houses at Duddleston Heath are supplied from Lord Trevor's main. The Baschurch water supply is still in the same unsatisfactory condition. Baschurch and Duddleston water supplies are under the consideration of the Council.

Work Places. Fifty-six places are on the register. They have all been inspected and dealt with.

Bake-houses, Cowsheds, and Dairies have also been inspected.

LUDLOW (Urban).

Medical Officer of Health C. B. CRANSTOUN, M.B.

<i>Area in Acres</i>	..	..	..	..	..	..	..	418
<i>Population</i>		<i>at 1901 Census</i>						6,373
<i>Number of inhabited houses</i>		"						1,372
<i>Number of persons per house</i>		"						4.6

Character of the District.

" Ludlow is a small agricultural town on the southern border of Shropshire, about 360 feet above sea level. It is situated on a large spur of limestone rock, which rises at the lower end of the Corve Valley. " On the north, west, and south sides, it is separated from the surrounding hills by the rivers Corve and Teme. " On the east side the ground gradually rises till it becomes continuous with the Clee Hill Range."

Statistics.

The natural increase of population during the year was 25. The population is estimated at the middle of 1908 to be 6,570.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1908	17.6	1.07	.15	2.13	.76	1.07	.15	3.19	.91	119	21.7
Averages for years 1898-1907	18.4	..	..	..	..	..	..	..	..	121	26.4

The zymotic death-rate was due to 6 deaths from measles, and 1 from diphtheria.

Infantile Mortality and Care of Infants. Dr. Cranstoun advocates the instruction of the senior girls in the schools and the teaching of mothers in their homes as a means of improving the health of infants.

Isolation Hospital. A hospital for general infectious disease is advocated, and two beds per thousand are advised.

Water Supply. The supply has been good both in quality and quantity, and the higher parts of the town are now well supplied.

The Abolition of Privy Middens. A statement of the conversion of middens to water-closets shows that 134 houses were provided with water-closets in 1908, and that the conversion from privies to water-closets is going on satisfactorily.

Disposal of Excrement and Refuse. Refuse is conveyed to Portman Meadow and is disposed of satisfactorily.

LUDLOW (Rural).

Medical Officer of Health A. E. WHITE, M.B., D.P.H.

<i>Area in Acres</i>	..	..	..	..	..	..	..	66,350
<i>Population</i>			<i>at 1901 Census</i>		..	..	..	9,585
<i>Number of inhabited houses</i>		„		..	..	..	..	2,003
<i>Number of persons per house</i>		„		..	..	..	..	4.7

General Character of the District.

" The district lies partly on the Western slopes of the Clee Hills, and the greater part of it is hilly in character. The population is thinly scattered over the district, except at two points, viz. : the Clee Hill, where a number of the quarrymen working at the Granite Works live, and at Craven Arms, a railway centre of some importance.

"Bye-laws have been adopted in regard to slaughter-houses, dairies, cowsheds and milkshops, new streets and buildings, cleaning of ash-pits, earth closets, privies and cesspools, and also for nuisances."

Statistics.

The natural increase of population during the year was 136. The population is estimated at the middle of 1908 to be 9,858.

The zymotic death-rate was due to 1 death from measles, and 1 from diphtheria.

Infantile Mortality. Of the 23 deaths under 1 year, 11 were due to premature birth, and for the last three years this has been the chief cause of mortality in infants. Most of these occur in the Clee Hill district, and Dr. White states that this is due to some extent to the want of a sufficient number of properly trained midwives.

Infectious Disease. Forty-six cases of scarlet fever, 14 diphtheria, 6 erysipelas, 1 enteric fever, and 2 puerperal fever were notified.

An outbreak of 20 cases of scarlet fever at Clee Hill was attributed to cases notified very late in the course of the disease. At Munslow, after information had been received from the School Attendance Officer, 7 unnotified cases of scarlet fever were discovered.

There was an outbreak in October of 7 cases of diphtheria in the Clee Hill district.

Ten schools were closed on account of measles, 5 on account of whooping cough, 2 on account of chicken-pox, and 1 on account of diphtheria.

House Accommodation. "There are a good few cottages in the outlying parts of the district, that require to be thoroughly repaired or closed, and I think it would be well if a systematic inspection of this class of property were undertaken by the new Sanitary Inspector."

Twenty cases of over-crowding were dealt with.

Drainage and Scavenging. It is suggested that new drains should be inspected and approved before they are passed by the Council.

Water Supply. "At Aston Munslow there has been no improvement, there is plenty of water but it is all subject to gross pollution."

Workshops, &c. These have been visited regularly and in several cases improvements carried out.

Bake-houses are in most cases clean, but some need improvement in ventilation.

Dairies and Cowsheds have received much attention and in ten cases alterations have been made. There is much carelessness in cleaning the floors and keeping the cows clean.

Nuisances.—One of the most important nuisances is caused by drainage on the roadside.

NEWPORT (Urban).

Medical Officer of Health M. GEPP, L.R.C.P.E., D.P.H.

<i>Area in Acres</i>	...	..	..	..	..	..	768
<i>Population</i>			<i>at 1901 Census</i>		..	..	3241
<i>Number of inhabited houses</i>		..		..	..	..	720
<i>Number of persons per house</i>		..		..	..	..	4.5

Physical Features and General Character.

" The Urban District is of small area, of rather more than a square mile, lying on the eastern border of the County. It is level in contour, the general elevation being some 250 feet above Ordnance Datum. " The natural drainage is to the west, but there is no stream of any importance. The subsoil is the Bunter Beds of the new red sandstone. The District includes the town of Newport, consisting chiefly of one long and wide street about one mile in length, running north and south, with several narrow lanes and passages and courts running from it at right angles. This part of the town is old and compact, and there is about the centre some crowding of houses upon area. To east and west is open country with extensions of more modern villa residences and artisan cottages along the roads converging on the town, and some outlying collections of houses. Newport is a market and residential town. There is a brewery and a tanyard."

Statistics.

The natural increase of population during the year was 22. The population is estimated at the middle of 1908 to be 3,169, and corrected for public institutions, 3,100.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth-rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1908	15.5	1.29	.32	1.61	.32	2.58	.97	.32	.32	69	23.2
Averages for years 1898-1907	16.1	..	..	..	..	..	..	..	..	106	25.6

The zymotic death-rate was due to 4 deaths from whooping cough. There were 5 deaths from phthisis.

Infectious Disease. Two cases of scarlet fever and 1 of puerperal fever were notified. Whooping cough was somewhat prevalent, and the Roman Catholic School was closed in consequence. Mumps caused the closure of two schools.

Isolation Accommodation. There is a small hospital consisting of a cottage with two wards of two beds each. A permanent increase of the ward space is advocated. There is an arrangement for joint action in an emergency of small-pox.

Disinfection. The Sanitary Inspector is provided with a spraying apparatus. The provision of a steam disinfecter is advocated.

Water Supply. There is a public water supply laid on to the houses, and to standpipes, derived from three wells in the Bunter Beds to the south of the district. Seven houses were connected to the mains during the year, and very few private pumps remain in use.

Sewerage and Drainage. The town is well sewered and the outfall works consist of grit chamber, open septic tank, and single contact filter, the effluent passing into the Strine brook. A small area of land is available for storm water.

New drainage is done under the regulations and submitted to the water test.

Excrement Disposal. About one quarter of the houses have water closets. The remaining houses having privies of old construction. Sixteen old privies have been converted to water-closets and three to pail closets during the year.

“ I may repeat that there are numerous privies in which the Council could readily take action under sec. 36 of the Public Health Act, 1875, and being satisfied that the privy was sanitarily ‘insufficient,’ could enforce the substitution of a water-closet at the cost of the owner, and it is my opinion that such action taken in a few of the worst cases would make a most useful example.”

Scavenging. The scavenging and removal of house refuse is undertaken by the Council. Steps are being taken for the abolition of the large open ash pits for storage of house refuse.

Housing. There are a number of worn out old houses in the town, principally in the lanes and passages off the main street. As a result of representations in 1907, 5 houses have been voluntarily closed, and 6 have been partly demolished or converted into business premises.

Permissive Powers. The Public Health Acts (Amendment) Act, 1890, part III., and the Infectious Disease (Prevention) Act, 1890, have been adopted. Bye-laws are in force with respect to Nuisances, New Streets and Buildings, Slaughter-houses, and Common Lodging houses. Sanction is being applied for, for the adoption of parts II., III., IV., and V., of the Public Health Acts (Amendment) Act, 1907.

Dairies, Cowsheds, and Milkshops. Regulations were made in 1899. There are 16 dairies on the register—inspected half-yearly.

Slaughter-houses—11 on the register—inspected regularly. Dr. Gepp refers to the unsatisfactory trade in meat carried on and the attempt to form a joint area, and he suggests that “a good deal might still be done locally to supervise the ‘Emergency’ butchering business, if the Council could arrange with an expert and appoint him to undertake the work in the District.”

Common Lodging-houses—three, under regular inspection.

NEWPORT (Rural).

<i>Medical Officer of Health</i>	..	..	M. GEPP, L.R.C.P.E., D.P.H.
<i>Area in Acres</i>	..	..	22,807
<i>Population</i>	<i>at 1901 Census</i>	..	6,033
<i>Number of inhabited houses</i>	,,	..	1,284
<i>Number of persons per house</i>	,,	..	4.7

Physical Features and General Character.

" The District is in part agricultural and part industrial, and lies within the eastern border of the County. The northern and larger part is on the Shropshire Plain, here formed of the Bunter beds of the new red sandstone, and is entirely agricultural. The elevation of this part varies from 150 to 300 feet above Ordnance Datum. The southern and much smaller part rises rather rapidly from the plain, reaching some 500 feet elevation at the extreme border on the south, and comprises the apex of the extensive triangular coal-field, which has its base some miles to the south. This part lies upon the coal measures, with a small intrusive outcrop of much broken older strata, forming Lilleshall Hill. The natural drainage is by various small streams from the south and east flowing towards the west, and falling into the Tern river outside the District.

" There are nine parishes in the District, all agricultural, except the large parish of Lilleshall, which is in part agricultural, but also contains the industrial area of Donnington Wood, several collieries and some engineering and other ironworks, employing the majority of the workers in this area."

Statistics.

The natural increase of population during the year was 37. The population is estimated at the middle of 1908 to be 6,006, and corrected for public institutions, 6,030.

Period.	Death-rates per 1000 population from										Infant Death-rate per 1000 Births.	Birth-rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases.	Cancer.			
1908	16.9	1.66	.33	1.0	.33	.83	1.66	2.32	1.49	133	22.4	
Averages for years 1898-1907	15.0	..	..	..	..	..	..	..	..	116	25.8	

The zymotic death-rate was due to 2 deaths from measles, 4 from whooping cough, 1 from enteric fever, and 3 from diarrhoea.

Infantile Mortality. The heavy rate was due to the deaths directly and indirectly caused by measles and whooping cough.

Infectious Disease. Two cases of scarlet fever, 1 of enteric fever, and 3 of erysipelas were notified. The source of the enteric fever was obscure, but the water supply was unsatisfactory, and a fresh supply was advised. Measles and whooping cough were prevalent, and three schools were closed on account of measles. The Council have accepted the offer of the Shropshire Nursing Federation for the supply of a trained nurse in times of epidemic of measles or whooping cough.

Phthisis. There were 5 deaths from phthisis.

Hospital Isolation. There is no hospital isolation, but there is an arrangement for providing a tent in case of small-pox.

Disinfection. The Sanitary Surveyor disinfects rooms by means of spraying. The purchase of a portable steam disinfecter has been recommended, but no steps taken.

Water Supply. *Church Aston* and *Chetwynd Aston* are supplied from Newport Urban District supply, and an extension has been made to *Blackberry Bank* and *Pave Lane*. *Lilleshall village* is supplied by the Duke of Sutherland from a well in the Bunter measures, and the mains are carried to *Muxton village* and the greater part of *Donnington village*. *Donnington Wood* has for many years been supplied from the Granville Colliery, and in the early part of the year, this water was apparently the cause of an extensive outbreak of diarrhoea. In consequence the householders were advised to boil the water before drinking it. The Lilleshall Company was communicated with and asked to exercise every precaution to safeguard the water, and the necessity for hurrying on the supply from Lilleshall was pressed. Considerable progress has been made during the year in laying on this supply, and it is hoped that the Granville water will be completely disused during the present year. *Tibberton village* is supplied by standpipes from a well outside the village, the water being raised by a wind pump. *Edgmond village* has a private supply from a well in the sandstone, laid on to several houses and to a public fountain.

When the supply to Donnington Wood is completed the district will be well supplied as regards the majority of the population and as to the main centres. Further improvements will be principally in the supply to individual houses and small groups of houses.

Sewage, Drainage, and Excrement Disposal. In *Edgmond village* there are four separate outfalls, and the question of improving the south-west outfall is having attention. The drainage of *Donnington Wood* was much improved in 1905, and has been still further improved. In several villages the house drains are connected to road drains or discharge on gardens, or into ditches or water courses, generally without offensive accumulations.

The general system of excrement disposal is by privies and vaults. The substitution of earth-closets for privies where they are defective or near wells is strongly recommended.

Housing. In the agricultural area, housing conditions are on the whole fair, in the industrial area, many houses are of an insanitary type. Whilst noting the good work done by the Lilleshall Company, Dr. Gepp, speaking of the "Barracks" says:—"They need to be thoroughly well spouted and troughed, the roofs ceiled, and through ventilation provided. Dampness of the walls and floors should be dealt with by proper disposal of the roof water, by pointing and repairing brickwork, and, if necessary, by drainage of the ground along the footings of the walls, and raising the floors." A difficulty has arisen in this and other rural districts because some owners prefer to close houses rather than to go to the expense of the necessary repairs. The Sanitary Inspector in his house to house inspection has paid special attention to overcrowding, but he experiences much difficulty in dealing with these cases on account of lack of better accommodation.

Dairies, Cowsheds, and Milkshops. Model Regulations were adopted in 1907. There are 38 cowkeepers on the register, and 115 visits of inspection were paid.

Factories and Workshops—Seventeen on the register. Two of these are bakehouses. Periodical inspections are made.

OAKENGATES (Urban).

Medical Officer of Health JOHN A. ROSE, M.A., M.B., D.P.H.

Area in Acres	2,327
Population at 1901 Census	10,906
Number of inhabited houses	2,187
Number of persons per house	5.0

General Character of the District.

" The District was formed in 1898, and included parts of three Rural Districts, viz.:—Wellington, " Newport, and Shifnal.

" It contains an area of about 3,600 acres, and includes thickly populated areas, and open country with " scattered cottage property, which are fast becoming much more Urban in character through extensive " building operations that have been going on; for example, in the Trench, Furnace Lane, and the outlying " parts of St. George's. Throughout the area different portions of the District vary much in altitude.

" The District is the centre of important Coal Mining and Iron Industries; is full of cottages that were " built a number of years ago, and, as is common in such districts, without the slightest attention to sanitation.

" This has added to the difficulty of reaching the comprehensive sanitary improvements which you as a " Council have attained.

" In all properties of recent date since the formation of the Council and the establishment of Building " Bye-Laws, buildings have of course been erected on modern lines, but much has still to be done in either " pulling down or altering old property to suit more modern requirements.

" The further erection of cottages or dwellings for workmen, artisans, etc., is badly needed, only 31 new " houses being erected last year in the whole of the Area."

Statistics.

The natural increase of population during the year was 191. The population is estimated at the middle of 1908 to be 11,073.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1908	18.0	1.72	.81	.81	.63	.72	1.72	1.35	1.08	128	33.8
...

The zymotic death-rate was due to 11 deaths from measles, 3 from whooping cough, 3 from diphtheria, and 1 from scarlet fever.

Infectious Disease. Twenty-six cases of scarlet fever, 10 of diphtheria, and 5 of erysipelas were notified. Six out of the 10 cases of diphtheria occurred at the Gower Street Schools, and here the closet accommodation was found to be insanitary. The County Council is supposed to have this matter in hand. Two cases occurred in the New Buildings where the pail closet system exists within four or five feet of the back doors of the houses. The conversion of these closets to the water carriage system is urgently needed. A severe outbreak of measles which was the subject of a special report at the beginning of the year, died out at the end of March.

Medical inspection has done little so far to mitigate the spread of impetigo contagiosum, favus, scabies, etc., which are still very common.

There were 9 deaths from phthisis, and 7 from other tubercular diseases.

House Accommodation. Frequent and systematic house to house inspections have been made and a number of cases of overcrowding, dirty houses, and sanitary defects have been dealt with. A large number of improvements have been made to the old cottage property, especially by the Lilleshall Company.

Drainage and Scavenage. An extension of the new drainage system has been completed and many defects at the Sewage Farm have been remedied. The abolition or reconstruction of ash-pits and privies and the substitution of bins have greatly altered the sanitary condition of the district.

Water Supply. Water is pumped from a deep well some three miles away from the district to a reservoir, and from it, it is supplied by gravitation.

Cowsheds. "Many of the cowsheds and conditions of obtaining and disposing of milk are still unsatisfactory. The milk sold is often poor in quality and dirty. All milk in this district should be scalded before use."

The condition of the meat market is much improved.

OSWESTRY (Urban).

Medical Officer of Health R. DE LA P. BERESFORD, B.A., M.D.

<i>Area in Acres</i>	..	..	..	..	..	..	..	1,887
<i>Population</i>		<i>at 1901 Census</i>						9,579
<i>Number of inhabited houses</i>	,,			..	..	..	..	2,083
<i>Number of persons per house</i>	,,			..	..	..	..	4.6

Statistics.

The natural increase of population during the year was 126. The population is estimated at the middle of 1908 to be 9,950.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1908	13.8	.20	.30	.60	.90	1.0	.60	1.91	1.31	89	24.8
Averages for years 1898-1907	16.2	..	..	..	..	..	..	..	..	105	26.4

The zymotic death-rate was due to 1 death from measles and 1 from diarrhoea.

Infectious Disease.—Twenty-four cases of scarlet fever, 28 of diphtheria, 7 of erysipelas, and 1 of enteric fever were notified. Diphtheria was principally the remainder of an outbreak in the previous year. The cases both of scarlet fever and of diphtheria were generally of a mild character and difficult to recognise. The case of enteric fever was probably imported.

Scavenging. The house refuse is still removed every day by the Town Authorities, and the effect of this on the health of the town must be good.

Water Supply. The town is supplied with upland surface water, the gathering ground being almost completely owned by the Corporation. The supply is supplemented in times of shortage, from the Liverpool Water Works. Dr. Beresford hopes to see some system of filtration adopted in future, although risks of pollution are very slight indeed.

The Lodging houses, Slaughter-houses, Dairies, Cowsheds, Bakehouses, Factories and Workshops have been carefully looked after during the year.

The dairies and cowsheds in the town are in a good condition, but it is suggested that there should be some right of inspection of the sources of milk coming into the Borough.

The Elementary Schools in the town are all very clean and kept in excellent condition.

OSWESTRY (Rural).

Medical Officer of Health R. DE LA P. BERESFORD, B.A., M.D.

<i>Area in Acres</i>	..	..	..	..	..	..	..	60,366
<i>Population</i>	..	..	..	..	..	..	..	14,727
<i>Number of inhabited houses</i>	..	..	..	..	..	..	..	3,220
<i>Number of persons per house</i>	..	..	..	..	..	..	..	4.6

Statistics.

The natural increase of population during the year was 137. The population is estimated at the middle of 1908 to be 15,000.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth-rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1908	14.2	.20	.33	.46	1.0	.93	1.0	2.26	1.53	102	24.0
Averages for years 1898-1907	15.2	..	..	..	..	..	..	..	..	94	26.4

The zymotic death-rate was due to 1 death from whooping cough, 1 from diphtheria, and 1 from diarrhoea.

Infectious Disease. Twenty-three cases of scarlet fever, 23 of diphtheria, 8 of erysipelas, and 1 of cerebro spinal meningitis were notified. Five cases of diphtheria arose on account of a case imported from an infected house near Reading, and 2 cases from a patient who had recently been discharged from a hospital as convalescent from scarlet fever. A case of scarlet fever also occurred from a patient discharged from another fever hospital. The diphtheria outbreaks, other than the imported cases, were mostly in the lower parts of the district.

Isolation Hospital. The only hospital is that of the Workhouse. "Disinfection is carried out by the most modern methods."

Housing Accommodation continues to improve. Several of the older houses were closed.

Sewerage and Scavenging. The sewerage of Weston Rhyn is under consideration. The scavenging of some of the larger villages is much to be desired.

Water Supply. Nantmawr has been supplied with exceedingly pure water.

Porthywaen is very badly off for water, and steps for improving the supply are suggested.

Slaughter-houses, Dairies, Cowsheds, Bake-houses, Factories and Workshops are on the whole satisfactory. Sweeping reforms have been necessary in some of the cowsheds.

The public elementary schools are well looked after, and most of them supplied with good water. They all require much more frequent washing out and cleansing.

SHIFNAL (Rural).

<i>Medical Officer of Health</i>	..	..	A. E. WHITE, M.B., D.P.H.
<i>Area in Acres</i>	..	..	45,380
<i>Population</i>	<i>at 1901 Census</i>	..	8,844
<i>Number of inhabited houses</i>	,,	..	,1918
<i>Number of persons per house</i>	,,	..	4.6

General Characters.

"In extent it has an area of 45,380 acres. Two parishes, and part of a third, situated in the County of Stafford, are administered by you. The population is small and for the most part thinly distributed, with an average density of one person to five acres."

"The District comprises sixteen parishes, all of them, excluding a portion of Shifnal and Albrighton, being strictly rural and agricultural. It overlies a succession of New Red Sandstone series, with coal measures at the extreme western boundary."

"Shifnal is the chief market town of the District, and has many attractions as a residential place."

"The Infectious Disease (Prevention) Act and part of the 1890 Amendment Act are in force."

"There are Bye-laws for Cowsheds, Dairies, and Milkshops, also for New Buildings and Nuisances."

"Public Institutions in the District include the Workhouse, a Cottage Hospital, and an Isolation Hospital for Small-pox."

Statistics.

The natural increase of population during the year was 122. The population is estimated at the middle of 1908 to be 8,750.

Period	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1908	12.3	.46	.23	.11	.46	.80	.46	1.71	.69	65	25.0

The zymotic death-rate was due to 3 deaths from scarlet fever, and 1 from diarrhoea.

Infectious Disease. Forty-eight cases of scarlet fever, and 1 of erysipelas were notified. At Tong an outbreak of 20 cases was originated by a servant coming home with a sore throat. The school was closed on two occasions, and visits to houses resulted in finding unnotified cases on three occasions. The school was the principal cause of the spread of the disease. At Brineton, cases were found in one house unnotified, and the children had returned to school whilst peeling.

House Accommodation. There are sufficient cottages for the needs of the district, and on the whole they are in good condition.

Drainage and Scavenage. In Shifnal about 40 old privies have been converted to water-closets and further conversions are advocated. The Shifnal outfall works are turning out a satisfactory effluent. At Albrighton a Local Government Board Inquiry has been held for compulsory powers to purchase land.

Water Supply. The public supply has been still further extended.

Workshops. A register is kept and the various places are visited regularly.

Bake-houses, Slaughter-houses, Dairies and Cowsheds have had regular attention.

SHREWSBURY (Urban).

<i>Medical Officer of Health</i>	<i>M. GEPP, L.R.C.P.E., D.P.H.</i>
	<i>CECIL A. REYNOLDS, M.B., D.P.H.</i>
<i>Area in Acres</i>	<i>3,525</i>
<i>Population at 1901 Census</i>	<i>28,395</i>
<i>Number of inhabited houses</i>	<i>6,065</i>
<i>Number of persons per house</i>	<i>4.68</i>

“ The coming into operation of the Education (Administrative Provisions) Act, 1907, made it necessary for Education Authorities to appoint a Medical Officer to carry out certain duties in connection with the Medical Inspection of School Children and other matters, and in accordance with the expressed wish of both the Board of Education and the Local Government Board that there should be close correlation between this official and the Medical Officer of Health, the Borough Council decided to appoint a Medical Officer to act under both the Sanitary and Education Committees, and to devote his whole time to the duties of the two offices.”

Dr. Reynolds was appointed and commenced his duties on July 1st, 1908.

Physical Features and General Character of the District.

“ The Borough comprises 3,525 acres, forming an area nearly equal in length and breadth, and roughly quadrangular. This area lies in the valley of the Severn, having a gradual fall to the river, and varying in elevation from 150 feet to 260 feet above sea level. The geological formation is varied, the Permian Red Sandstone occurring in a band across the centre, with the Bunter beds of the New Red Sandstone to the north, and the coal measures to the south. The actual subsoil is, however, mainly river drift, of varying and generally considerable thickness. In places stiff clay, but generally sandy and dry in the upper part, with clay underlying at greater or less depth. The contour offers good natural drainage to the Severn, which owing to its devious course flows over a length of some eight miles through or along the borders of the district.

“ The climate of Shrewsbury is mild and possesses the characteristics of a valley climate. The open nature of the valley and the varied contours of the town, together with the course and movement of the Severn through and around the town, prevent stagnation of the air, and river fogs, even in the low-lying parts of the town, are neither so frequent nor so common as might be expected.

“ The town lies within the rain shadow of the hills of Wales and the Border Country, and the rainfall is moderate. The rainfall for Shrewsbury in 1908 was 24.46 inches, as given in the tables of meteorological data published in the quarterly reports of the Registrar General.

“ The old town of Shrewsbury stands on two hills of generally moderate ascent, but steep in parts. It is nearly surrounded by the river, which here makes a horse shoe curve some two miles round, with a width across the neck of about 400 yards.

“ The enclosed part is mostly densely built on. Of the various suburbs across the river, Frankwell forms an old settlement on the North-West, with modern extensions chiefly of villa residences along the main roads radiating from it; Kingsland is a modern residential suburb to the South-West; Coleham an old settlement to the South-East, with Belle Vue, a modern extension, adjoining; Abbey Foregate, old near the river, modern and residential further out, lies to the East.

“ To the North-East, on the low lying ground outside the neck of the peninsula is the considerable district of Castle Fields, built over for the most part some fifty or sixty years ago, and forming an artisan residential quarter.

“ Shrewsbury is a market and residential town, an important railway centre, and the natural centre for the trade of a large agricultural district, a large number of main roads converging on the town. Industrial works are neither numerous nor extensive for a town of the size of Shrewsbury. There are large maltings, three breweries, a tanyard, an agricultural implement works, a railway carriage and wagon works, an iron foundry, tobacco and cigar factory, gas works and electric light works.”

Statistics.

The natural increase of population during the year was 211. The population is estimated at the middle of 1908 to be 29,653, and corrected for public institutions, 29,913.

Period	Death-rates per 1000 population from										Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.			
1908	15.9	1.20	.60	1.23	.26	1.33	.73	2.0	.97	123	23.2	
Averages for years 1898—1907	16.4	..	..	..	..	..	..	..	..	135	25.1

The birth-rate was 1.9 below the average of the past ten years.

The zymotic death-rate was due to 6 deaths from scarlet fever, 8 from diphtheria, 10 from whooping cough, 2 from fever, and 13 from diarrhoea.

There was an increase in the number of deaths from bronchitis, influenza, and phthisis, as compared with 1907.

The death-rate was highest in locality I. (Quarry, Stone, and Castle Wards), and locality II. (Welsh Ward), and this is undoubtedly due to the crowded and insanitary condition of the houses.

Infantile Mortality was 13 per thousand less than in 1907. The annual report of the Shrewsbury Health Visiting Society shows that 3,120 visits were paid in the year 1908 principally with the object of advising mothers on the care of infants. The Sanitary Committee now pays the Health Visitor who undertakes the visiting under the notification of Births Act, 1907, which came into force at the beginning of 1909. It is hoped that this step will reduce the infantile mortality, but the reduction is not likely to be great until the housing conditions are improved.

Infectious Disease. Two hundred and twenty-five cases of scarlet fever, 71 of diphtheria, 10 of enteric fever, 17 of erysipelas, and 3 of puerperal fever were notified.

Scarlet Fever. The cases were mostly mild and principally occurred in the second half of the year. St. Chad's School was closed in September and October, and St. George's in October and November. These districts were those principally affected, but there were scattered cases throughout the Borough unconnected with schools. The epidemic being mild, cases were overlooked in the early stages.

Diphtheria. In March there were 5 cases in Trinity School, and on swabbing the suspicious throats, 3 children were found to have diphtheria bacilli. In the second half of the year there were 42 cases but no evidence of school influence. The Sanitary Committee defrayed the cost of antitoxin treatment in necessitous cases and paid for protective antitoxin inoculation. Three cases were removed to the emergency hospital.

Enteric Fever. One case was imported, and the origin of the remainder obscure.

Puerperal Fever. Two of the cases were fatal.

Phthisis. Twenty-eight cases were voluntarily notified. The cases were visited where necessary by the Health Visitor. It is much to be regretted that more cases are not notified.

Isolation Hospital. There is an emergency hospital of two wards and six beds. A suitable site for a hospital was found at Radbrook but abandoned on account of opposition, and the Sanitary Committee finally decided to utilise Monkmoor Hall, using the house as an administrative block and erecting ward pavilions in the garden. Accommodation will be for the most part free.

Public Disinfection. A steam disinfecting station is advocated. The disinfection of rooms is carried out by the Sanitary Inspectors by spraying with formaldehyde or by formalin vapour.

Water Supply. The existing dual system is too well known to need description. A scheme has been adopted for clarifying the river water by means of pressure filters. "The removal of dirt from the river water will be a very great boon to the town, and will result in a large saving of money spent in renewing fittings and boilers which have been rendered useless by it. It seems highly probable that the knowledge that the water has been filtered will induce many people to make use of it for culinary purposes, for many of which it is preferable to the much harder, if purer, conduit water. The Water Committee have thus taken on themselves a certain responsibility, and though the type of filter chosen is undoubtedly very effective, it ought to be looked upon as an essential part of the process that the filtrate should be frequently examined bacteriologically, or the water should be treated with some bitter or similar chemical so as to discourage its use for dietetic purposes."

Sewerage and Drainage. "Much good work has been done during the year in the re-modelling of old drainage under the supervision of the Sanitary Inspector, and the old and unsatisfactory drains are being gradually replaced by properly ventilated and disconnected systems. The water carriage system of excrement disposal is practically universal through the town."

Housing. Closing orders were obtained in respect of 13 houses. "The strongest argument for the need of drastic reform in the housing conditions of Shrewsbury has already been pointed out in dealing with the general, infantile, and phthisis death-rates."

Offensive Trades. Proceedings have been successfully instituted in two cases.

Slaughter-houses. The Sanitary Committee have secured by purchase most of the slaughter-houses in Roushill, and are now considering their demolition and the provision of a Public Abattoir.

Dairies, Cowsheds, and Milkshops. There are 134 persons on the register, 39 being cowkeepers and milksellers in the Borough; 36 being cowkeepers and 59 milksellers residing out of the Borough. The premises in the Borough have been inspected.

Permissive Acts. The Public Health Amendment Act, 1890, and the Notification of Births Act, 1907, have been adopted. Part of the Public Health Act, 1907, has been adopted but is not yet sanctioned by the Local Government Board.

Factories and Workshops. "There are 264 workshops on the register, including 42 bake-houses. These have all been inspected and their sanitary condition kept in review. One underground bakehouse remains in use."

Sale of Food and Drugs Act. Fifty-six samples were submitted for examination. Proceedings were taken in two cases of milk and one of coffee, but all were either dismissed or withdrawn.

TEME (Rural).

<i>Medical Officer of Health</i>	..	..	JOHN H. K. GRIFFITHS, M.B.
<i>Area in Acres</i>	..	..	23,091
<i>Population</i>	<i>at 1901 Census</i>	..	1,846
<i>Number of inhabited houses</i>	..	..	388
<i>Number of persons per house</i>	..	..	4.7

Statistics.

The natural increase of population during the year was 7. The population is estimated at the middle of 1908 to be 1,846.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases.	Cancer.		
1908	16.7	4.33	.54	.54	.54	.0	.0	3.79	1.08	167	19.5
..

The zymotic death-rate was due to 6 deaths from whooping cough, and 2 from diphtheria.

Infectious Disease. Five cases of diphtheria, and 3 of scarlet fever were notified, 2 of the latter being imported from Manchester.

House Accommodation is adequate and in an average state of repair.

Sewerage and Sewage Disposal. The sewage is mostly disposed on the land, and in some cases carried away by water courses.

Pollution of Rivers. There is very little.

Excrement Disposal. Generally by means of privies and middens.

Water Supply. The question of supplying Bucknell with water is still under consideration. The water supply of Kinsley remains in the same unsatisfactory condition.

Dairies, Slaughter-houses, etc.,—two small dairies, one slaughter-house, and one bakehouse—kept in a clean and sanitary condition.

Public Elementary Schools are in good sanitary condition, and have a good supply of water except in the case of Bucknell.

Isolation Hospital Accommodation is not satisfactory.

WELLINGTON (Urban.)

Medical Officer of Health A. E. WHITE, M.B., D.P.H.

<i>Area in Acres</i>	..	..	..	..	..	..	..	381
<i>Population</i>			<i>at 1901 Census</i>		..	..	..	6,283
<i>Number of inhabited houses</i>		„		..	..	..	..	1,327
<i>Number of persons per house</i>		„		..	..	..	..	4.7

General Character of the District.

"Wellington is the centre of a large agricultural district, and serves as the market town for it and the neighbouring mining and manufacturing districts. Six lines of rail converge on the town and make it easy of access from all parts of the country, so that visitors come in considerable numbers in the summer, and several large and well-equipped boarding schools have grown up here. The town has an area of 684 acres. The surface levels vary a good deal, and for the most part drainage gradients are satisfactory. The subsoil is clay and gravel overlying the lower layers of new red sandstone. The water supply is under the control of the Council, who have water rights over some of the surrounding rural area besides. The sewers of the town are modern, and the outfall is half a mile from the town."

Statistics.

The natural increase of population during the year was 47. The population is estimated at the middle of 1908 to be 7,573.

"I think this (the death-rate 14.9) is capable of considerable reduction if the dilapidated property in the Courts off High Street and Glebe Street was either done away with or placed in proper repair. The closing of houses is not altogether satisfactory; they still prevent proper ventilation in other houses and keep the sunshine off them."

The zymotic death-rate was due to 1 death from scarlet fever, 3 from whooping cough, 2 from diphtheria, and 2 from diarrhoea.

Infectious Disease. Twenty cases of scarlet fever, 15 of diphtheria, and 4 of erysipelas were notified. The origin of thirteen cases of scarlet fever was attributed to a boy who was constantly in the streets whilst infectious. Prosecution was ordered in this case but abandoned. Seven of the cases of diphtheria occurred in connection with Wrekin Road Public Elementary School.

Phthisis caused 10 deaths. Voluntary notification is in force and 5 notifications were received. Dr. White says that this is disappointing and that it appears as if compulsory notification will be required. All the houses were disinfected after death.

Disinfection of houses is by spraying and fumigation. Clothing and bedding are disinfected by steam after scarlet fever.

House Accommodation. "There still exists a large number of houses which either impede the development of the children, or actually breed disease; where sunshine, light, and fresh air have difficulty in carrying out their beneficial work." The building of small cottages is much required, and this the Council ought to take up if there is to be any great improvement in the slum property in the town. Three cases of overcrowding were dealt with.

Drainage and Scavenage. A large number of defective drains, privies, and water-closets have been dealt with. The privies will give much trouble until they are abolished. The sewage works are in working order and promise to entirely do away with the pollution of the stream.

Water Supply. Plans for the sand filters are still under consideration, and the gathering ground is to be further protected against pollution. It is intended to do away with the Steeraway supply when the works are completed. "As the supply now stands it cannot be regarded as a safe one, and the new works are essential."

Factories and Workshops. The register is kept up to date and the places inspected regularly and found satisfactory. The majority of the bake-houses are clean and well ventilated.

Cowsheds—fifteen in number—do not show the amount of improvement that was expected when the Model Bye-laws were put in force last year. One of the cowsheds is the worst Dr. White has ever inspected in Shropshire, and others are not much better. Two of them at least should be closed.

Common Lodging-houses—three in number—are well kept.

Slaughter-houses—eight on register—satisfactory.

WELLINGTON (Rural).

Medical Officer of Health *W. T. HAWTHORN, M.R.C.S.*

<i>Area in Acres</i>	..	..	..	..	..	..	..	..	33,791
<i>Population</i>			<i>at 1901 Census</i>		..	..	..	..	11,773
<i>Number of inhabited houses</i>		„		..	..	..	..	..	2,499
<i>Number of persons per house</i>		„		..	..	..	..	..	4.7

Statistics.

The natural increase of population during the year was 140. The population is estimated at the middle of 1908 to be 11,388.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth-rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1908	13.4	.26	.0	.61	.18	1.58	.79	1.76	.97	79	24.1
Averages for years 1898-1907	..	..	..	..	..	..	..	..	..	95	32.0

The zymotic death-rate was due to 2 deaths from measles and 1 from whooping cough.

Infectious Disease. Five cases of diphtheria, 3 of erysipelas, 7 of scarlet fever, and 219 of measles were notified. Measles of a mild form was epidemic over the whole district, and four schools were closed in consequence. One school was closed on account of whooping cough, and one on account of chicken-pox.

Sewerage and Sewage Disposal. Schemes have been got out for the sewerage and sewage disposal in the parish of Hadley and the village of Admaston. Attention is called to the insanitary condition of Ketley.

Water Supply. A good supply of water is being provided for Lawley Bank, in the Wellington Rural Parish, through the Dawley Urban District Council. It is pointed out that the lower portion of this parish is also urgently in need of water, and it is suggested that this may be obtained through the Oakengates Urban District Council.

Cowsheds and Slaughter-houses. There are 24 cowkeepers and milksellers on the register. Their premises have been inspected and generally found satisfactory. There are 16 slaughter-houses, and 131 visits have been made.

WEM (Urban.)

Medical Officer of Health JOHN DALLEWY, L.R.C.P., M.R.C.S.

Area in Acres .. . .	..	..	..	..	..	..	..	..	..	450
Population	at 1901 Census									2,149
Number of inhabited houses										453
Number of persons per house										4.7

Statistics.

The natural increase of population during the year was 14. The population is estimated at the middle of 1908 to be 2,274.

Period.	Death-rates per 1000 population from										Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Disease	Cancer.			
1908	15.3	.00	.44	.44	.00	2.20	.00	.44	1.32	96	23.3	
Averages for years 1900—1907	14.4	..	..	..	..	..	..	..	..	97	26	

There were no deaths from the common infectious diseases.

Infectious Disease. Eight cases of scarlet fever, and 2 of diphtheria were notified. Seven of the cases of scarlet fever occurred in one house. An epidemic of mumps necessitated the closure of one school.

Tuberculosis. Phthisis caused 1 death. Voluntary notification is in force, but no cases were notified. Disinfection of premises in known cases and after death is carried out.

Disinfection is carried out by the Sanitary Inspector, and disinfectants are supplied where necessary. The steam disinfecter is used where necessary.

Hospital Accommodation. There is no isolation hospital.

House Accommodation is very good. Ten houses were built during the year.

Water Supply—is abundant and excellent. 18.2 gallons per head were used during the year.

Drainage and Scavenage. There is a public system of scavenage, and a system of sewage disposal is being carried out.

Slaughter-houses—Lodging-houses (2)—Workshops (61)—Dairies and Cowsheds—have all been regularly inspected and found satisfactory.

Schools. There are two public elementary schools which are satisfactory both as regards sanitary arrangements and water supply.

WEM (Rural.)

<i>Medical Officer of Health</i>	..	..	JOHN DALLEWY, L.R.C.P., M.R.C.S.
<i>Area in Acres</i>	..	..	.. 52,001
<i>Population</i>	..	at 1901 Census	.. .. 8,266
<i>Number of inhabited houses</i>	..	..	.. .. 1,840
<i>Number of persons per house</i>	..	..	.. .. 4.5

Statistics.

The natural increase of population during the year was 102. The population is estimated at the middle of 1908 to be 8,265.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth-rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer		
1908	13.2	.36	.48	1.21	.36	.36	.85	.85	.97	61	24.4
Averages for years 1898—1907	12.0	..	..	..	..	..	..	..	..	81	24.0

Infantile Mortality. "There is, throughout the district, greater care taken in the rearing of infants than formerly. This is, I think, due to the fact that we have a better class of midwives who are able to instruct mothers how to feed and clothe their infants.

The zymotic death-rate was due to 1 death from measles, 1 from scarlet fever, and 1 from diarrhoea.

Infectious Disease. Sixteen cases of scarlet fever, 1 of diphtheria, 4 of erysipelas, and 5 of puerperal fever were notified. One school was closed on account of influenza, and 2 on account of scarlet fever.

Disinfection. Disinfectants are supplied where necessary by the Sanitary Inspector. The steam disinfecter has been found most useful not only in notifiable infectious disease but also in cases of phthisis and cancer where it has been necessary to disinfect bedding and clothing.

Hospital Accommodation. There is no hospital except for small-pox.

Housing Accommodation on the whole is good.

Water Supply. Plans have been prepared for supplying Barker's Green and Aston from the Wem Urban Council's mains. Schemes for supplying Prees and Whixall will shortly be carried out.

Cowsheds and Dairies have been inspected and found on the whole fairly satisfactory.

The Public Elementary Schools. The sanitary condition is speaking generally good, and the water supplies satisfactory.

WENLOCK (Urban).

Medical Officer of Health	M. GEPP, L.R.C.P.E., D.P.H.	
Area in Acres .. ..	.. ..	22,657
Population at 1901 Census .. ..	.. ..	15,866
Number of inhabited houses .. ..	.. ..	3,568
Number of persons per house .. ..	.. ..	4.4

General Character of District.

" The District comprises 22,522 acres, exclusive of water, being the largest Borough in area in the Country. " This area is of very irregular outline, but is, roughly, some ten miles in greatest length, from north to south-west, and has a mean breadth of some four miles, being narrowest where the Severn, traversing the district from west to east, makes a natural division, the part lying to the south of the river having three or four times the area of the northern part, though with less than half the population.

" The district is for the most part a tableland lying at an elevation of from 400 to 600 feet or more ; the Severn forming a deep cutting through this elevated land, its banks rising very steeply on either side from about 150 feet O.D. at the water level to the general height of about 500 feet O.D. The central and eastern part, nearly half the area, lies upon the coal measures. To the west the formation is the Wenlock and Ludlow beds of Silurian age, forming a considerable part of the southern division, and extending also to a limited extent across the river in the northern division. Much of this ground lies in ridges with intervening valleys at a height of from 600 to 800 feet. At the southern extremity the old red sandstone occurs. The natural drainage is to the Severn, by small streams falling as a rule steeply into the river within the district, but the southern part of the southern area drains to the south by small streams which meet the Severn some distance outside the district.

" The district is in large part industrial, the chief industries being coal and iron mining, iron manufactures, and brick and tile works. There is also a large china factory. These industries are confined to the northern area together with a small part of the southern area near the river. The greater part of the southern area is entirely rural and agricultural, and thinly populated. For purposes of local administration the Borough is divided into four wards, each having a separate Sanitary Committee acting as the Sanitary Authority.

" These wards, with their area, population, and general character are as follows :—

Ward.	Area in Acres.	Census Population 1901	Situation.	General Character.	A penny rate produces.
Madeley	2797	8442	North of Severn	Urban and Industrial Coal and Iron	£109
Broseley	1962	3916	South of Severn	Urban and Industrial Brick and Tile	£54
Much Wenlock	8751	2210	South of Severn	Agricultural	£46
Barrow	9012	1298	Both sides of Severn	Agricultural	£31

" **MADELEY WARD.**—This area consists of Madeley parish, and lies upon the coalfield north of the Severn. It has relatively the densest population and comprises the township of Ironbridge, irregularly disposed upon the steep bank of the Severn, with the township of Madeley on the tableland about a mile distant to the north-east, and the more scattered district of Coalbrookdale adjoining on the west. It includes also the village of Coalport on the riverside east of Ironbridge."

" **BROSELEY WARD.**—This area consists of Broseley parish, and lies upon the coalfield south of the river, and comprises the township of Broseley on the high tableland above the river bank, and the village of Jackfield along the river side."

" **MUCH WENLOCK WARD.**—This consists of Much Wenlock parish, and is a large area of agricultural land with one or two considerable lime burning works, and includes the small market town of Much Wenlock lying in a large shallow basin on the limestone at an elevation of some 500 feet."

" **BARROW WARD.**—This comprises a large area of thinly populated agricultural country, comprising the parishes of Little Wenlock on the north of the Severn and the parishes of Benthall, Posenhall, Barrow, Willey, and Linley, on the southern side. The population is very scattered and there is no considerable collection of houses."

Statistics.

The natural increase of population during the year was 148. The population is estimated at the middle of 1908 to be 15,894, and corrected for public institutions, 15,900.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth-rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases.	Cancer.		
1908	14.8	.50	.63	1.0	.44	1.32	.82	2.07	1.26	102	24.0
Averages for years 1898-1907	16.9	..	..	..	..	..	..	..	..	106	27.3

Dr. Gepp says:—"I noted in the last Annual Report the sharply marked fall in the death-rate in the last five years compared with the previous five, and the correspondence of this with the provision of the main water supply of the Borough. It is very satisfactory to add another year of low rate."

The zymotic death-rate was due to 1 death from measles, 2 from whooping cough, 2 from diphtheria, and 3 from diarrhoea.

The deaths from *Phthisis* numbered 16.

Infectious Disease. Twenty-two cases of scarlet fever, 6 of diphtheria, 4 of erysipelas, and 1 of puerperal fever were notified. The Sanitary Inspector reports in connection with one fatal case at Much Wenlock that the road had been opened up in the previous week and that he noticed five drain or sewer openings which appeared to be untrapped within a short distance of the house. Dr. Gepp remarks that the trapping of the street openings into the sewers should receive attention and the sewers ventilated on some definite and approved principle. Measles was somewhat prevalent in the Broseley and Coalbrookdale Districts, and three schools were closed. The Council decided not to adopt the suggestion of the Shropshire Nursing Federation with regard to the supply of a trained nurse as required for measles and whooping cough. On this matter Dr. Gepp recommends that the Council ascertain whether the services of the District Nurse of the Lady Forester Charity could not be secured for this purpose.

Isolation Accommodation. There is an isolation hospital at Broseley for small-pox, but no accommodation for ordinary infectious diseases.

Disinfection. The Sanitary Inspector disinfects rooms by spraying or fumigating. The recommendation for the provision of a steam disinfecter is repeated.

Water Supply.—Broseley and Madeley Joint Scheme. This scheme was completed in 1902. The supply is from a deep well and boring, in the Bunter beds at Harrington. The water has about 16° of hardness, and is of great purity. It is laid on to standpipes and to an increasing

number of houses. *Much Wenlock*.—The town is supplied by a pumping scheme from an Artesian well in the Shale Measures of the Wenlock Limestone situated in the Tannery field near the town. The water is now laid on to most of the houses. On account of shortness, the Committee called in an Engineer to report and advise. *Stretton Road Spout*, being a supply to a considerable number of houses, was examined and showed some evidence of surface contamination. Investigation is recommended. *The Village of Bourton* is supplied by the owner from a spring, water being forced to a reservoir by a ram. The remaining portions of the district are supplied from individual pumps and springs.

Sewerage and Drainage. The contour of the district affords generally good surface drainage. “The sewers of the various towns in the Borough are, generally speaking, old and imperfect, and appear in the main to be culverted water courses or drains laid originally to take surface water. The outfall of most of the main sewers is either directly into the Severn, or into streams which fall into the Severn within the District.” The sewers generally have no system of flushing and no system of ventilation except untrapped road gullies. Complaints of nuisances are not uncommon. A systematic investigation of surface openings should be made and properly dealt with.

Excrement Disposal—principally by outside privies with underground vaults, often offensive from defective structure or neglect of scavenging. Six objectionable ‘drained privies’ were converted to water-closets.

Scavenging. In Madeley Wood Ward there is public scavenging, and ashes and refuse are removed on notice being given to the Surveyor. This public scavenging has good results. In other divisions, scavenging is effected by the owners or occupiers. In Broseley there are several public ash pits scavenged by a contractor under the Committee. Continued effort is necessary for the conversion or improvement of vault privies.

Housing. The majority of the houses of the district are old and show defects due to age and faulty construction, and the census shows a high proportion of small houses. There is so much old and decaying property in the Borough as to constitute a considerable difficulty in dealing with it, especially as there is no building of new cottages. “Continued effort should be made by inspection, and by representation to keep the old property in the best state possible. Points to which attention should specially be given are conditions causing dampness, whether by defective roofs, absence or defects of eaves troughing and spouting, or walls imbedded in the earth. Defective lighting and ventilation should be remedied wherever possible by increased window area, and through ventilation secured where practicable. Dampness and darkness are the chief indications of unwholesomeness in houses.

Permissive Powers. The Infectious Disease (Prevention) Act, 1890, and the Public Health Acts, (Amendment) Act, 1890 (except part IV.), are in force. Official sanction is now awaited for parts 2, 3, 4, and 5 of the Public Health Acts (Amendment) Act, 1907. Bye-laws are in force with respect to Common Lodging-houses and Slaughter-houses.

Common Lodging-houses—two on register—frequently inspected.

Slaughter-houses—no register—are inspected frequently.

Bakehouses—Thirty on register. Inspection has resulted in much improvement.

Dairies, Cowsheds, and Milkshops. Regulations were adopted in 1905. Fourteen premises have been added to the register during the year, making a total of 22. Lighting and ventilation has been improved in 16 cowsheds; drainage in 12; and 9 have been repaved.

WHITCHURCH (Urban.)

Medical Officer of Health M. GEPP, L.R.C.P.E., D.P.H.

<i>Area in Acres</i> ....	...	...	...	...	...	...	...	4,784
<i>Population</i>		<i>at 1901 Census</i>						5,221
<i>Number of inhabited houses</i>		"						1,129
<i>Number of persons per house</i>		"						4.6

Physical Features and General Character.

"The Urban District lies within the northern border of the County, and comprises a considerable area of agricultural land surrounding the town of Whitchurch. The general elevation varies from about 270 feet to 350 feet above Ordnance Datum. The subsoil is the red marl of the new red sandstone. The town occupies the centre and higher part of the district, the fall of the ground being from south and east to west and north-west, and the natural drainage by small brooks leaving the district towards the north-west, as tributaries of the Dee. The centre of the town is old and compact, considerable extensions of more recent buildings existing along some of the main roads radiating from the town. The surrounding parts of the District are entirely rural and agricultural, extending some two to three miles to the north-east and south-west of the town and to about a mile to north-west and south-east. Whitchurch is a market and residential town, and the land around is extensively employed for grazing and dairy farming. It is the centre and market of a large cheese making industry. There is a brewery, maltings, a tanyard, and engineering works."

Statistics.

The natural increase of population during the year was 50. The population is estimated at the middle of 1908 to be 5,424, and corrected for public institutions, 5,370.

Period.	Death-rates per 1000 population from									Infant Death-rate per 1000 Births.	Birth rate.
	All Causes.	Seven Chief Zymotic Diseases.	Epidemic Influenza.	Phthisis.	Other Tubercular Diseases.	Bronchitis.	Pneumonia.	Heart Diseases	Cancer.		
1908	14.7	.93	.56	.93	.37	.93	.74	3.54	1.49	66	25.3
Averages for years 1898-1907	15.3	..	..	..	..	..	..	..	..	107	26.3

The zymotic death-rate was due to 2 deaths from scarlet fever, 1 from measles, and 2 from diphtheria.

Phthisis caused 5 deaths.

Infectious Disease. Sixty-one cases of scarlet fever, 20 of diphtheria, and 2 of erysipelas were notified. The cases of scarlet fever were widely distributed and mild in character, and in consequence cases were overlooked and the disease spread. School influence was not well marked. Dr. Gepp says that there has been an unusual prevalence of scarlet fever during the last eight years, and he thinks it probable that one may expect in a year or two a period of comparative

immunity. Six cases of diphtheria were associated with the Wesleyan School, although spread over a considerable time. An examination of the children was made and one child found to have diphtheria bacilli. He was excluded and no further cases occurred for nearly three months. One school was closed on account of measles. The Council has decided to take advantage of the Shropshire Nursing Federation offer for the supply of a trained nurse as required, to visit all cases of measles and whooping cough. The Council applied for a nurse in October, but the arrangements of the Federation had not then been made.

"The experience of the District in 1907 shows clearly the scope for measures to prevent unnecessary loss of life from epidemics of measles and whooping cough. These diseases, with bronchitis and pneumonia, together accounted in 1907 for 25 deaths, 18 of which were of children under 5 years of age. In 1908 the same diseases caused only 10 deaths, 5 of which were of children under 5 years of age. The epidemic of 1907 may be debited with 13 deaths of young children, and the effect upon the various death rates may be readily shown."

Isolation Hospital. There is no isolation hospital for the ordinary infectious diseases. There is a small-pox hospital on Prees Heath to serve several districts.

Disinfection. The Sanitary Inspector sprays infected rooms. The purchase of a steam disinfecter conjointly with the Rural District has been deferred.

Water Supply. Increase in demand has caused the water supply to be inadequate, and the Council has had the whole question under careful review. The Surveyor reports "that eleven bores were put down to a depth of from 43 to 51 feet; six 3-inch copper tubes were sunk to the same depth; and three new collecting wells made in brickwork and cement. The clay being pierced, a new source of water has been tapped and the additional yield was shown at the final gauging to be 3,180 gallons per hour. This is so satisfactory that the Council has decided to give the bores a prolonged test before taking any further steps."

"The water from the most distant of the three older bore holes having been found to become peaty has now been cut off from the supply."

"The collected water is softened by lime treatment to a hardness of about seven degrees, and pumped by steam power to a covered reservoir. A sample of the water taken from the reservoir was analysed during the year and found satisfactory.

Sewerage and Drainage. The town is well sewered on modern lines, and the sewers are ventilated by a number of shafts with rotary extractors. The Surveyor reports "the Council have decided to construct at the Hadley Sewage Farm, new grit and septic tanks, with storm overflow, to assist in the purifying of the sewage, and to take out the solids before allowing the sewage to run on the grass land. The work will be put in hand as soon as possible, the sanction of the owner of the farm having been obtained."

Excrement Disposal. In the water supply area, over 800 houses have water-closets, and about 200 have privies or earth-closets. The conversion of all offensive or defective privies should be insisted on.

Removal of House Refuse. There is a system of regular collection in the more thickly populated and poorer areas, about 220 houses being dealt with. This collection should be extended.

Housing. There are many old and practically worn out houses in the yards and old streets of the town.

Permissive Powers. The Council has adopted part III. of the Public Health Acts (Amendment) Act, 1890, and the Infectious Disease (Prevention) Act, 1890, with the exception of sec. 5, 6, 15, and 17. Steps are being taken to adopt parts of the Public Health Acts (Amendment) Act, 1907. Bye-laws are in force with regard to Nuisances, New Streets and Buildings, Slaughter-houses, Common Lodging-houses, Tents, Vans, etc., used as Habitations.

Dairies, Cowsheds, and Milkshops. Regulations made in 1898 are in force. There are 25 dairies on the register—inspected quarterly. The adoption of "Model Regulations" is advised.

Slaughter-houses—eight on register—inspected regularly and kept in a satisfactory state.

Common Lodging-houses—Four on register. Though the premises are old, they are kept clean under inspection.

WHITCHURCH (Rural).

<i>Medical Officer of Health</i>	<i>M. GEPP, L.R.C.P.E., D.P.H.</i>
<i>Area in Acres</i>	
<i>Population</i>	11,701
<i>at 1901 Census</i>	
<i>Number of inhabited houses</i>	1,924
<i>Number of persons per house</i>	424
<i>all Features and General Character</i>	4.5

Physical Features and General Character.

" The District lies within the northern border of the County, adjacent, along its northern boundary, to the Whitchurch Urban District. The general elevation is from 300 to 400 feet O.D., the contour being gently undulating. The subsoil is the red marl of the new red sandstone, with the exception of a small area in the south-east, where an outlier of the Lias occurs at Ightfield. There is generally a considerable thickness of morainal drift covering the strata. The natural drainage is by small streams to north and south, the water-partings between the Weaver, Dee, and Severn river systems crossing the District. The District is entirely rural in character and the population scattered, the small villages of Tilstock, Ash, Broughall (all in the large parish of Whitchurch Rural), and Ightfield, comprising the main collections of houses. The land is largely employed for grazing and dairy farming. The District is naturally very healthy, the average death-rates for preceding years being low."

Statistics.

The natural increase of population during the year was 10. The population is estimated at the middle of 1908 to be 1,882, and corrected for public institutions, 1,900.

The birth-rate in the past two years has shown a very heavy falling off.

The zymotic death-rate was due to 1 death from diphtheria.

Infectious Disease. Fourteen cases of scarlet fever, 1 of erysipelas, and 8 of diphtheria were notified. Scarlet fever was of a mild type, no deaths resulting. Nine cases occurred around Tilstock at intervals, and the school was closed on account of prevalence of sore throat. An outbreak of diphtheria at Catterall's Lane showed the necessity of swabbing contacts in an infected house before they are allowed to return to school. A case was notified in an adult in January, and the children in this house were kept away from school for three or four weeks. On account of a further outbreak of two cases in the school, these children's throats were swabbed, and three of them were found to contain diphtheria bacilli.

Hospital Isolation. For small-pox the district is included in the Whitchurch Joint small-pox Hospital District. There is no hospital for other diseases.

Disinfection. The Sanitary Inspector disinfects rooms. A spraying apparatus and a formalin lamp are provided. The provision of a steam disinfecter has been under consideration but no action has yet been taken.

Water Supply. At Broughall and Tilstock public pump-wells have been provided, and at Ightfield there is a pump-well open to the public. At Tilstock the relaying of the drawpipe is advocated on account of its faulty coating. At Ash a supply has been provided from a reservoir, the water being piped to a tank and a pump placed over it. The extension of this supply to 6 houses in Vicarage Road is recommended. Elsewhere houses are supplied by shallow wells and dip-wells, many of which on inspection and analysis are shown to be liable to contamination. Improvement of a defective supply to six cottages at Tilstock Bank has now been effected.

Drainage and Excrement Disposal. Except at Tilstock and Broughall where there are lengths of combined drains, the houses drain separately on gardens or into streams or ditches.

Excrement Disposal is mostly by privies with vaults.

Housing. The condition of the cottages is on the whole fair, although there are many requiring regular inspection to keep them in habitable condition. The Sanitary Inspector completed a house to house inspection in 1906.

Permissive Powers. The Infectious Disease (Prevention) Act, 1890, is adopted with the exception of sections 5, 6, 15, and 17, but not the Public Health Acts (Amendment) Act, 1890. Bye-laws are in force with regard to Private Scavenging, Common Lodging-houses, Nuisances, and New Streets and Buildings.

Dairies, Cowsheds, and Milkshops. There are 9 cowkeepers and milk sellers on the register.

